



Hardware Ranch Wildlife Management Area Management Plan



UTAH DIVISION OF

Wildlife Resources

DRAFT
November 2, 2011

*Prepared by The Hardware Ranch Stewardship Team
and Logan Simpson Design, Inc.*

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State of Utah
Department of Natural Resources
Division of Wildlife Resources

Hardware Ranch Wildlife Management Area Management Plan

Approved: _____
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Executive Summary

The Hardware Ranch Wildlife Management Area (HRWMA) is located in Cache County in northern Utah approximately 15 miles east of Hyrum in the Blacksmith Fork River drainage, and encompasses approximately 14,278 acres. Elevations in HRWMA range from 5200 to 7600 feet. The topography varies from rolling hills to steep canyons, with vegetation types including sagebrush, conifers, aspen and riparian corridors. Features of HRWMA include:

Big Game Wintering Habitat - Much of the HRWMA functions as deer and elk wintering habitat and is considered critical for over- winter survival of many of the deer in the area. Brush communities in the area have diminished. This, combined with heavy winters, has reduced deer populations in the area. The main challenge to reverse this trend will be to reestablish and/or reinvigorate brush communities. This can be accomplished by controlling invasive weeds, managing grazing and recreational access and undertaking habitat restoration projects with big game species in mind.

Elk Feeding Station - A winter elk feeding program at HRWMA has operated since the winter of 1947. The purpose of the feeding program is to draw elk away from agricultural areas in Cache Valley. The acquisition of the property was ideal because it is located away from the populated valley and agricultural fields. It also has 120 acres of grass hay that is harvested annually to provide feed in the winter. One of the challenges in raising hay to sustain the feeding program is updating head gates and eroded canals. Updated head gates will require less maintenance and be more productive.

Wildlife Conservation Outreach - The initiation of the elk feeding program also coincided with a growing education element in the 1950's within the "Fish and Game Department," as it was then called. To capture education opportunities at HRWMA, personnel began offering free rides on the "feed" wagon to see wintering elk. In 1971, the Utah legislature passed a bill to create a Visitor's Center to expand outreach opportunities. In 1988, the Utah Legislature cut funding support for the sleigh rides. The following year, a fee structure was approved and the outreach rides resumed. Funding is the main challenge in conducting outreach programs at HRWMA.

Recreation - The HRWMA offers the backdrop for dispersed fish and wildlife- based activities including hunting, fishing, trapping and OHV use. Unchecked vehicle access and use in some areas has resulted in aesthetic and habitat degradation. OHV use has grown sharply in the past ten years. Summer-long recreational camping is a growing problem. Camping areas have been "claimed" for weeks at a time by campers in some areas of the HRWMA.

Important management objectives at HRWMA include:

- » Maintain and enhance habitat for big game (deer, elk and moose) and sensitive wildlife species;
- » Maintain, protect and enhance aquatic and riparian habitat and wildlife species;
- » Maintain and enhance outreach programs;
- » Maximize annual hay production (minimum production of 350 tons of grass hay); and
- » Develop and Implement access management practices.

Management at HRWMA is unique among the big game oriented wildlife management areas operated by the Utah Division of Wildlife Resources because of its outreach and education program, the elk feeding program and on-site habitat management. The challenges include growing recreation demands, the presence of many invasive plant species and habitat loss. This plan resulted from many hours of work by the HRWMA Stewardship Team to identify needs, goals and objectives that address them. These planning efforts also sought to involve and inform the various publics who use and care about HRWMA. This comprehensive management plan will remain in effect for an indeterminate period, but will be revisited in five years and revised if necessary. An updated Operations Manual will be developed as a result of this planning effort.



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Wildlife Management Area Management Plan

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1.0 Introduction

1.1 The Utah Division of Wildlife Resources

The mission of the Utah Division of Wildlife Resources (Division) is to serve the people of Utah as trustee and guardian of the state's wildlife, and to ensure its future and values through management, protection, conservation and education.

The Division believes that maintaining sustainable and diverse wildlife populations is valuable to all citizens of Utah, and has long recognized the important role habitat plays in maintaining sustainable fish and wildlife resources. It has established over 100 Wildlife Management Areas (WMAs) in Utah, including Hardware Ranch Wildlife Management Area (HRWMA).

1.2 Purposes and Structure of the Management Plan

This Management Plan was prepared by the Division as guidance for the management of HRWMA. It identifies goals and objectives for HRWMA management, provides background; describes current management and resource conditions; and discusses programs, activities and trends. In accordance with statutory direction, the substantive provisions of this Management Plan include:

- » A mission statement for HRWMA that describes the primary purposes of management at HRWMA;
- » A statement of goals and objectives to achieve the desired future conditions of habitats, wildlife, outreach and facilities at HRWMA;
- » Identification of tasks to achieve the Management Plan goals and objectives, and
- » A description of HRWMA resources and current management conditions that identifies current uses, limitations and opportunities at HRWMA.

The hierarchy of this Management Plan begins with the mission statement, followed by goals, objectives, and implementation tasks. Most technical data and other background information are summarized in tables and appendices.

A mission statement for HRWMA has been developed as a framework for identifying management goals and objectives as follows:

“The mission of the Hardware Ranch Wildlife Management Area is to provide healthy habitats that support sustainable wildlife populations, and to increase public awareness and stewardship of Utah’s wildlife.”

The mission of HRWMA is unique among Utah wildlife management areas because of staffing and the on-site approach to elk feeding, habitat management and public outreach. It is also the only WMA managed by the Conservation Outreach section of the Division.

This Plan addresses HRWMA property and operations management as well as a variety of activities that have historically occurred on the WMA including; winter elk feeding, hunting, fishing, camping, livestock grazing, OHV use, and facilities and infrastructure development. These activities were critically reviewed to determine their compatibility with the HRWMA mission, as well as their impacts to natural resources.

1.3 Public Involvement and the Plan Adoption Process

Although the development of this Management Plan is primarily an agency activity, the Division recognized the importance of effective public participation in the planning process. Public involvement activities to solicit and consider input included forming a Technical Advisory Committee (TAC); maintaining a web page on the Division's website to gather public comments during the planning process; conducting a public open house; and presentation to the Regional Advisory Committee at a public meeting. A description of the Management Plan adoption process is at Appendix B



2.0 Management Goals, Objectives & Tasks

The focus of this Management Plan is the HRWMA management goals and objectives identified during the planning process, and the tasks required to implement them. Implementing the mission, goals, and objectives will lead to the desired future condition of HRWMA. Implementation tasks identify the specific actions required to achieve the Management Plan goals and objectives, and require the commitment of time and resources for completion. Some of the management and property goals are not currently funded, but are listed here to indicate that they remain important to the implementation of this Management Plan, and achieving the mission of HRWMA.

2.1 Wildlife and Habitat Management Goals, Objectives and Tasks

To track the implementation results of this plan, benchmarks have been listed for identified tasks in the following Goals, Objectives and Tasks tables. An annual report will be prepared that will track Plan implementation progress, as well as help to develop formal Habitat Council projects and funding requests.

| Wildlife and Habitat Management Goals, Objectives & Tasks | | |
|---|--|---|
| Goal 1 - Manage wildlife and habitat to support Division and Region management policy and conservation agreements. | Objective 1.1 – Manage habitat and plan projects intended to improve rangeland conditions and tangibly maintain Wildlife Management Unit (WMU) objectives. with emphasis on mule deer, elk , moose and sensitive species. | Tasks: 1.1 1. Prioritize habitat projects on HRWMA to meet WMU objectives. 2. Identify appropriate habitat manipulation activities and projects to meet management unit objectives. 3. Develop and implement a public access policy for HRWMA that is consistent with resource management policy and WMU objectives. 4. Formalize a weed control program on HRWMA. Benchmarks: Develop habitat projects, review needs and progress of previous years' projects as well as progress and needs of public access policy. A report with all four of the tasks in this goal will be part of the Standard Operating Procedure for HRWMA. This report will be shared with the Habitat and Wildlife Sections by October of each year. |
| | Objective 1.2 - Feed elk to reduce depredation. | Tasks: 1.2 1. Maximize hay production on HRWMA via fertilizer and irrigation as a primary priority. Production of at least 350 tons is required. 2. Tailor elk feeding activities according to biological evaluation. Benchmarks: Evaluate harvest quantity and quality in August of each year and document results in the table of annual hay production found in 4.4.4. of this plan. Evaluate soil needs each spring and fall. |
| Goal 2 – Identify, protect and improve riparian habitat. | Objective 2.1 – Identify, and monitor all riparian areas on HRWMA. | Tasks: 2.1 1. Establish criteria for identifying riparian areas on HRWMA. 2. Map and mark all riparian areas. Benchmarks: Review mapping needs each October and create maps shape files that follow riparian criteria. |
| | Objective 2.2 – Control livestock and camping and vehicle access to riparian areas. | Tasks: 2.2 1. Monitor and control access to riparian areas and enclosures. 2. Construct new enclosures and control fences as necessary. 3. Establish photo monitoring of riparian areas as necessary. Benchmarks: Ensure riparian enclosures are stipulated in grazing contracts. Grazing contracts will be advertised no later than November. Conduct review with grazing contractors each spring in April/May to emphasize the importance of riparian exclusions. Identify three camping areas each year for access management as outlined in Appendix J, Camping/Access Management. |



Wildlife and Habitat Management Goals, Objectives & Tasks

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| Goal 2 – Identify, protect and improve riparian habitat. | Objective 2.3 – Improve water quality and stream channels. | Tasks: 2.3 1. Evaluate Rock Creek, Curtis Creek & the Blacksmith Fork River on HRWMA for water quality and structural problems. 2. Develop projects to address water resource problems. Benchmarks: Include a section on riparian habitats in annual review and preparation of habitat projects each October. |
| | Objective 2.4 – Improve water supply access for wildlife. | Tasks: 2.4 1. Develop dispersed water sites where necessary. Take into account impacts to surrounding habitats. 2. Establish livestock water access points to minimize impacts on wildlife and riparian habitats. Benchmarks: Map existing and potential water developments and establish photo transects with each. Identify livestock water access points in Requests For Proposals for grazing contracts. |
| | Objective 2.5 – Identify HRWMA management zones and respective objectives. | Tasks: 2.5 1. Evaluate and map management zones on HRWMA. 2. Establish objectives for each management zone. 3. Integrate management zone objectives into habitat & wildlife projects on HRWMA. Benchmarks: The table in Appendix C (Grazing) of this Plan has objectives listed for each zone. Track and evaluate annual activities in each management zone. |
| Goal 3 – Realign recreational usage to reduce negative effects on wildlife habitat. | Objective 3.1 – Control motorized vehicle access and evaluate camping areas to eliminate negative impacts to wildlife resources. | Tasks: 3.1 1. Identify impacts to resources caused by motor vehicles and trailers. 2. Change vehicle access policy to reduce impacts. 3. Build fences & barriers to protect resources, as necessary. 4. Identify/designate camping and no camping areas consistent with resource evaluation. 5. Publish, post and enforce camping rules. 6. Explore interagency access management agreements with the Utah Division of State Parks and the U.S.D.A. Forest Service. 7. Manage campfire usage to protect wildlife habitat. Benchmarks: Prepare a catalog of all campsites with items from each task above listed for each campsite (sample table listed in Appendix J Camping/Access Management). Follow communication strategies for stakeholders listed in Appendix D Communications Plan. |
| | Objective 3.2 – Monitor public use on HRWMA. | Tasks: 3.2 1. Develop a program to monitor public use of HRWMA. 2. Coordinate with area Conservation Officers to increase enforcement of camping rules. 3. Ensure that the public is thoroughly informed regarding access and use policies and rules. Benchmarks: Post signs, publish handouts and notices for appropriate publications and follow strategies outlined in Appendix D, Communications Plan. Develop an Enforcement Action Plan with Conservation Officers if the problem persists after all has been done to inform the public. |



Wildlife and Habitat Management Goals, Objectives & Tasks

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| Goal 4 - Develop grazing prescriptions that comply with Administrative Rule R657-28 as a tool to create and enhance critical habitats. | Objective 4.1 – Continue Division range crew transects. | Tasks 4.1: 1. Evaluate and adjust current Range Trend transects as necessary. |
| | Objective 4.2 - Conduct baseline habitat evaluations of HRWMA Management Units. | Tasks 4.2: 1. Formalize a habitat monitoring program to evaluate grazing and other habitat programs during and following treatments. 2. Identify the level of evaluation required to prescribe habitat manipulation measures on HRWMA. |
| | Objective 4.3 - Monitor habitat conditions during grazing and other habitat improvement activities. | Tasks 4.3: 1. Conduct periodic habitat evaluations while grazing is in-progress. 2. Review and enforce objectives for HRWMA Management Units. |
| | Objective 4.4 - Periodically consult HRWMA Grazing Advisory Board. | Tasks 4.4: 1. Meet at least semi-annually to submit grazing objectives and results to the HRWMA Grazing Advisory Board for evaluation and recommendations. |
| | Objective 4.5 – Advertise grazing bids to include prescriptive grazing objectives. | Tasks 4.5: 1. Increase rangeland production of forbs to benefit transitional and summer big game areas, as well as nesting and brood-rearing sage grouse. Increase and maintain brush production for wintering big game. 2. Maintain and enhance riparian areas as highly productive aquatic and terrestrial environments. 3. Reduce undesirable vegetative species such as dyers woad, spotted knapweed, and cheatgrass. Provide grazing that does not detract from meaningful recreational and educational activities. 4. Create opportunities to increase public awareness and stewardship of wildlife and habitat 5. Reduce fine fuels that can trigger catastrophic wildfire. Benchmarks: Prepare an annual report in October that includes range transect and monitoring information. The report will contain spring and fall habitat assessments, and periodic reports from grazing in-progress review by the HRWMA Grazing Advisory Board. This report will be used to state current conditions is soliciting grazing bids. Grazing proposals will be reviewed annually in November. |
| Goal 5 - Support academic studies and cooperative agreements to better understand HRWMA resources. | Objective 5.1 – Formalize all studies and research on HRWMA. | Tasks: All Goal 5 Objectives 1. Ensure that academic studies and cooperative agreements contain a written proposal, agreement, and close out evaluation. 2. Formalize formats and project specific ‘results’ to maximize benefit from support of studies and agreements. Benchmarks: Prepare and staff a booth for the annual Natural Resources Day each spring to coordinate projects with Utah State University to promote results oriented studies and the format required. Prepare annual research report in October. |
| | Objective 5.2 – Identify appropriate vehicles for sharing study results. | |

2.1.1 Development Activities

Projects that will enhance the accomplishment of Wildlife and Habitat management goals include the following:

- » Create an updated Standard Operating Procedure Manual with input from the previous SOP to be reviewed by regional staff.
- » Catalog campsites each year for the next five years to manage camping activities and reduce environmental damage and increase stewardship of recreationists.
- » Invite representatives from user groups and stakeholders to an annual review of access policies, grazing and other habitat projects in late October of each year.



2.1.2 Desired future conditions

Management of Wildlife and Habitat will be focused on achieving the following conditions of management at HRWMA:

- » Elk management activities will continue to focus on disease testing: raising hay and feeding elk in winter months and enhancing range conditions.
- » Riparian habitat protection, restoration and enhancements will follow the examples of Curtis Creek and Rock Creek projects where fencing and restoration work allowed degraded areas to be restored to vibrant and functioning areas.
- » Water rights and in-stream flows will be managed to protect robust fish populations and aquatic life. Action plans for sensitive wildlife species will be clearly identified and followed according to conservation agreements and various species management plans.
- » Access and camping points will be well defined and clearly identified. Measures will be taken to prevent and control wildfires. Habitat degradation by recreational use will be reduced.
- » Big Game habitat protection, restoration and enhancements will focus on refined grazing practices that are designed as prescriptions to improve habitats for big game animals. Invasive weed control will be conducted to control or eliminate the spread of invasive weeds.
- » Grazing will be conducted in a manner that will enhance wildlife habitats. Grazing practices that contribute to degradation of riparian or other wildlife habitats will be eliminated.
- » Academic studies will be conducted on projects that will be useful in fulfilling the mission of HRWMA and will be meaningful to the students that conduct them.

2.2 Outreach Goals, Objectives and Tasks

- » HRWMA is within the Conservation Outreach section of the Division. Outreach is therefore a major component of management at HRWMA

| Outreach Goals, Objectives & Tasks | | |
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| Goal 1 - Facilitate awareness, exploration and inspire stewardship of wildlife resources through education, interpretation, volunteer opportunities and partnerships. | Objective 1.1 Provide quality opportunities for visitors to HRWMA, especially families. | Tasks 1.1 1. Continue sleigh rides that emphasize enjoying wildlife as a family activity. 2. Work with stakeholder groups to create winter access at Camp Wapiti to the tubing hill across the river. |
| | Objective 1.2 - Effectively interpret HRWMA mission, resources and management. | Tasks 1.2 1. Install displays funded by partners that encourage learning about wildlife and what DWR and partners are doing for them. Develop messages that focus on key species and sensitive species management for use in sleigh ride interpretation. |
| | Objective 1.3 Provide materials and information that inspire visitors to explore and participate in other wildlife oriented recreation. | Tasks 1.3 1. Provide brochures that encourage participation in hunting, fishing and wildlife watching. 2. Utilize big screen monitor with loop of select you tube videos in the visitor center that feature hunting, fishing and wildlife watching. 3. Create Utah Watch Our Wildlife (WOW!) Display in the Visitor Center. |
| | Objective 1.4 - Provide volunteer opportunities to provide public awareness and stewardship experiences. | Tasks 1.4 1. Kiosk sign development and maintenance that feature responsible camping rules, Leave No Trace Camping principles and wildlife recreation opportunities. 2. Focus volunteer projects on campsite improvements identified in Appendix J (Camping and Access Management). 3. Establish a volunteer based friends group to support outreach at HRWMA . |
| | Objective 1.5 - Collaborate with partners that support and advance public awareness and stewardship for wildlife and wildlife habitats. | Tasks 1.5 1. Develop and enhance partnerships and refine wildlife messages and experiences for participants in summer handcart programs. 2. Develop partnership with stakeholders to establish camping information and outreach materials. 3. Develop and formalize the partnership with Utah Parks and Recreation to develop concessions, monitor camping and OHV use. 4. Establish comprehensive interpretive and education training program. 5. Establish a monitoring and evaluation program for seasonal employees and continue training through out the year. |
| | Objective 1.6 Establish procedures to evaluate and monitor quality of all visitor services. | Tasks 1.6 Develop and adopt evaluation, assessment and monitoring protocols. |



Outreach Goals, Objectives & Tasks

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| <p>Goal 2 - Effectively communicate the HRWMA and Division missions and programs.</p> | <p>Objective 2.1 - Develop effective communication to increase awareness and gain support for HRWMA and Division program. (See Appendix D, Communications Plan)</p> | <p>2.1 Tasks 1. Incorporate agency themes and messages in strategies outlined in Appendix D, Communications Plan. Benchmarks – All Tasks: Create and distribute a visitor use survey. Create an inventory of all Visitor related signs and ensure that all signs follow DWR branding standards. Review themes and messages annually in October. Complete RMEF display in 2011. Establish a volunteer/partnership and appreciation event to be held annually in December. Use Template in Appendix D, Communications Plan to document communication activities and progress.</p> |
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2.2.1 Development Activities

Initiatives to implement in the Outreach goals of the Management Plan include:

- » Create an updated Standard Operating Procedure Manual that more fully reflects outreach activities and procedures and the importance of Outreach;
- » Invite representatives from user groups and stakeholders to an annual celebration of activities and accomplishment;
- » Develop a marketing strategy in cooperation with the DWR Marketing Coordinator;
- » Develop a comprehensive Public Outreach Plan.

2.2.2 Desired future condition

The desired future condition of HRWMA with regard to the outreach mission of the Division is:

- » Hardware Ranch Wildlife Management Area will continue to be viewed as one of Utah's top family traditions for wildlife recreation to see and experience elk and other wildlife through DWR operated sleigh rides in the winter. Families and others will have a great time when they come to Hardware Ranch WMA, and they will find inspiring examples of other wildlife activities they can explore and participate in. They will see displays that demonstrate how the Division of Wildlife cares for wildlife and wildlife habitat. There will be thought provoking and fun activities that will reinforce the idea that wildlife and wildlife oriented recreation adds richness and quality to our lives. The Annual Elk Festival will be held in December to "kick off" winter activities.

2.3 Facility Management Goals, Objectives and Tasks

In order to support the achievement of the management objectives for HRWMA, WMA facilities must be regularly maintained.

Facility Management Goals, Objectives & Tasks

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| <p>Goal 1 – Establish and Implement Administrative Guidelines to meet management objectives.</p> | <p>Objective 1.1- Develop & manage line item annual budget.</p> | <p>1.1 Tasks 1. Summarize current budget & spending. 2. Identify costs associated with Management Plan implementation.</p> |
| | <p>Objective 1.2- Manage routine WMA administration.</p> | <p>1.2 Tasks 1. Implement daily system to optimize administration and customer service. 2. Review web site and other ongoing electronic communication. 3. Promote public safety, employee training, and animal welfare at HRWMA.</p> |
| | <p>Objective 1.3 - Seek and develop compatible partnerships and associations.</p> | <p>1.3 Tasks 1. Identify organizations with missions, goals, and operations that are complementary HRWMA operations. 2. <u>Develop plans and formal partnerships to support HRWMA.</u></p> |
| | <p>Objective 1.4 – Accommodate public access and recreation consistent with mission and program requirements.</p> | <p>1.4 Tasks 1. Forecast changes to public access based on resource and project requirements. 2. Post informational signs in areas where access is changed. Benchmark all Goal 1 Tasks – Submit enhancement proposals by February 1 annually.</p> |



Facility Management Goals, Objectives & Tasks

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| Goal 2 – Implement annual maintenance program for capital improvements & major equipment enhancements. | Objective 2.1 - Fully implement the Wildlife Inventory Management System (WIMS). | 2.1 Tasks 1. Forecast annual cost of WIMs compliance as budget line item. 2. Schedule and conduct activities prescribed in WIMs automated program including physical inventories. 3. Identify & prioritize critical maintenance tasks. |
| | Objective 2.2 - Forecast & manage facility and infrastructure replacement. | 2.2 Tasks 1. Develop line item budget for major equipment maintenance, repair and replacement. 2. Integrate WMA infrastructure & equipment requirements for specific projects and programs. 3. Maintain & improve the draft horse program & associated equipment. Benchmark – All Goal 2 Tasks – Maintain a WIMS completion rate of 90 percent. |
| Goal 3 – Maintain Visitor's Center Kitchen, and Seating Area Facilities For Food/Visitor Services Concession. | Objective 3.1 - Explore food services concessions annually until a long term contractor is found. | 3.1 Tasks 1. Ensure that food concession proposals include methods for conveying messages and branding for DWR themes and messages. Benchmark – Advertise requests for proposals annually. The RFP should be advertised no later than the end of September. |
| Goal 4 – Administer the HRWMA Volunteer Program. | Objective 4.1 – Support volunteer programs consistent with available resources. | 4.1 Tasks 1. Identify specific resources available for volunteer programs at HRWMA. 2. Prioritize volunteer projects on HRWMA. 3. Track volunteer program costs and results. 4. Benchmark report on volunteer activities. |

2.3.1 Development Activities

Projects to implement in the Facility Management objectives of the management Plan include:

- » Develop a line item budget for Wildlife Inventory Maintenance (WIMs);
- » Continue repairs to the visitor center;
- » Obtain 2 more signs identifying entrances to HRWMA;
- » Continue to fund portions of noxious weed control with in-kind grazing assessment fees;
- » Install 3 new cattle guards required to complete grazing control measures along Rock Creek;
- » Remove and dispose of several miles of abandoned fence on HRWMA;
- » Incrementally replace 8 miles of deteriorating 2-rail pole fence with 4-wire fence;
- » Align annual infrastructure priorities with grazing and other habitat tools and plans;
- » Increase draft horse health care measures;
- » Build information kiosks at all 4 entrances to HRWMA;
- » Continue fencing projects to protect sensitive habitats and manage grazing (boundary and interior);
- » Obtain and post boundary signs/markers across HRWMA; and
- » Catalogue campsites and develop a camping plan for HRWMA.

2.3.2 Desired future Condition

Safe, functional, clean and neat appearance of facilities and terrain will continue to be the emphasis of facilities management at HRWMA. The Wildlife Inventory Management System (WIMS) will be conducted with a minimum of 90 percent completion to the list annually.

2.3.3 Annual Maintenance Activities

Annual maintenance activities for facilities and infrastructure will be managed via the Wildlife Inventory Management System (WIMs). Priorities include:

- » All maintenance items are assessed, listed and developed with methods or procedures as part of the annual work schedule. The WMA's Standard Operating Procedure Manual also has additional information.
- » *Fence maintenance*: Repair and replace dilapidated or damaged fences, walk-throughs and gates.



- » *Road maintenance/closures:* Pursue items in the main road improvement proposal; maintain fenced in areas where motorized vehicles are unauthorized. Assure that appropriate signs are in place to indicate any rules or restrictions.
- » *Parking areas:* Maintain existing parking areas.
- » *Noxious weed control:* Monitor and control noxious weeds with the use of herbicide, prescribed burning, grazing, mowing or replanting.
- » *Sign replacement:* Maintain boundary, entrance, and regulatory signs to clearly identify ownership, access, vehicle restrictions, and rules and regulations enforced on the WMA. Rebuild, repaint or replace signs as needed.
- » *Maintenance of water developments:* Pursue improvement proposals; maintain culverts, ponds, and ditches and canals to maximize water distribution on the WMA. Clean irrigation channels annually between February and mid-September as needed. Clean any clogged head gates as needed. Assess water control structures; replace at least two of the older head gates annually.
- » *Facilities:* Coordinate twice annual litter cleanup with UDWR personnel, volunteers at campsites and access parking lots.
- » *Wildlife Census:* Perform an annual wildlife and public census, and required surveys as listed and detailed in the Standard Operating Procedures (SOP) and coordinated annually with the area biologist.



3.0 Background Information

3.1 Hardware Ranch Wildlife Management Area

The HRWMA was established during a “procurement period of time” in the mid 1900s when the federal Wildlife Restoration Act enabled states to obtain properties to protect wildlife habitats and provide access for sportsmen.

3.1.1 Property location and description

The HRWMA is located in Cache County in northern Utah approximately 15 miles east of Hyrum. The HRWMA lies in parts of townships T10N and T11N; R2E, R3E, and R4E in the Blacksmith Fork River drainage, and encompasses approximately 14,278 acres. HRWMA is bordered by USDA Forest Service-managed lands, and private lands. Elevations in HRWMA range from 5,200 to 7,600 feet. The topography varies from rolling hills to steep canyons, with vegetation types including sagebrush, mountain brush, conifer, aspen and riparian corridors. Figure 1 shows the location and boundaries of HRWMA. An ortho-photo map of HRWMA and the surrounding terrain, showing the boundaries, roads and major features of HRWMA is located in Appendix A. Legal descriptions of the HRWMA lands owned by the Division are contained in a summary document referred to in Appendix E, Resources and Information.

3.1.2 Title Encumbrances

The primary property title encumbrance at HRWMA is the set of conditions prescribed by the original grant from the U.S. Fish and Wildlife Services under the Wildlife Restoration Act. Should the purpose of management of HRWMA be substantially changed from the purposes stated in the original grant, the Division may be responsible to reimburse the federal government for the purchase according to Federal Aid guidelines.

There are no current minerals or timber leases on HRWMA. Standard rights of way and easements for roads are in place with UDOT and Cache County. There is also a right-of-way for a telecommunications line.

3.1.3 Water rights

The Division of Wildlife Resources owns five primary water rights intended for domestic use, hay production, visitor center operations, residences and stock watering. Some diversions from Curtis Creek are approved for irrigation, stock watering and culinary use. Water rights include:

- 1.) 25-4263 is for water diverted from a spring for domestic.
- 2.) 25-4261, 4262, 4252 are for irrigation of 155 acres of hay production and for lawns
- 3.) 25-9761 is for domestic use at the Visitors Center.

3.2 Management Planning Framework

Utah Code Section 23-14-8 provides the director of the Division with ...“full control of all property acquired and held for the purposes specified in this title...” [UCA 23-14-8(3)]. Utah statutes also direct the Division to prepare management plans for the State’s WMAs. This Management Plan complies with the statutory direction for preparation of Division WMA management plans.

The Division Strategic Plan identifies goals and objectives that provide the framework for Division planning. The Division’s objectives are organized under three main goals as follows:

- » **Agency goal:** Improve the overall efficiency and effectiveness of the Division of Wildlife Resources.
- » **Resource goal:** Expand wildlife populations and conserve sensitive species by protecting and improving wildlife habitat.
- » **Constituency goal:** Achieve broad-based support for division programs and budgets by demonstrating the value of wildlife to all citizens of Utah.

The goals and objectives of this plan have been developed to support the overall Division strategic plan. This plan also complies with Administrative Rule R657-28 which provides for a variety of lawful uses and activities on Division lands, as long as they do not adversely affect wildlife or habitat.



3.3 Historic Uses and Acquisition of HRWMA

3.3.1 Historic Uses of HRWMA Lands

The land parcels that now comprise HRWMA were once privately owned. Historical land uses include ranching, cultivated fields, open range grazing, timber harvest, hunting, fishing, and other recreational pursuits. Beginning with the first land purchases in 1945, uses on the HRWMA have consistently included:

- » Winter elk feeding to reduce crop depredation in Cache Valley;
- » Providing and improving habitat for big game and other wildlife species; and
- » Accommodating public access for hunting, fishing and other wildlife related recreational uses.

The Town of Hyrum located downstream near the mouth of Blacksmith Fork Canyon was settled in 1860 by 23 pioneer families. By 1870, farming was well established in the southern areas of Cache Valley, and in 1873 construction of a road from Hyrum up the canyon to ranching, mining, timber harvest and other ventures was initiated. The canyon had always been a main route accessing good hunting and fishing, and the road then connected at the top to the historic Ant Flat Trail to the south.

By 1900 unrestricted hunting by early settlers had eliminated most of the elk from their natural ranges in northern, central and south central Utah. Although a hunting season was established in 1898, the only remnant Utah elk herd remaining was in the Uinta Mountains. Interstate transplants brought 200 elk into Utah from Idaho, Montana and Wyoming between 1912 and 1925 and elk from Yellowstone National Park were released into Logan Canyon, and near Brigham City. Sportsmen from Smithfield also moved 5 elk from Montana into Smithfield Canyon during the same period. Elk populations began to increase, and by 1929 small numbers of elk were being moved within Utah in an attempt to redistribute them into areas that would aid and balance the recovery.

By the 1940's, the elk population in the mountains above Cache Valley had increased dramatically and numbered in the hundreds. A few hundred wintered along the benches causing depredation by eating haystacks and crops and interfering with the increasing dairy and agricultural activities. Mule deer were also thriving and contributing to crop depredation.

In July 1940 the Utah Department of Fish and Game proposed to purchase lands on the Millville Face and the mouth of Blacksmith Fork Canyon in order to reduce crop depredation by big game in Cache Valley. *The Preliminary Project Statement* indicated:

"This area has, since colonization of the valley, been heavily grazed by livestock. After creation of the National Forests and control of grazing seasons thereon was initiated, these lands received added abuse as they were subjected to over-stocking during fall, winter, and spring months... Grazing by livestock should be prohibited if game animals are to be perpetuated in this locality... Although the State has done a great deal of supplemental feeding here for a number of years, the game herd has reached its peak and has definitely started down-hill with a heavy loss from poverty showing in the spring of 1939... With proper administration of these lands, game can again be increased without damaging results to the range... Some 2500 to 3000 deer and 400 to 500 elk are involved."

Subsequent acquisitions added lands to the Millville Face Winter Range. In 1945, the Utah Department of Fish and Game proposed to purchase ground further up Blacksmith Fork Canyon which was known as Hardware Ranch. The proposal stated:

"The Hardware Ranch, located on the Blacksmith Fork River, between North and South Cottonwood Canyons and Curtis Creek, has long been a troublesome area from the standpoint of damage complaints, principally from elk in haystacks in winter, and deer on cultivated and growing crops in spring... [The Ranch] produces from 150 to 300 tons of hay annually, dependent on the water supply... Since elk summered on and near the ranch, they soon became accustomed to feeding in the open stacks in winter and caused a great deal of loss to the owner... A few years ago, the State Department of Fish and Game constructed elk-tight stack yards to eliminate these losses. This resulted in a shift of practically the entire elk herd down the canyon and onto the face of the mountain between Hyrum and Providence where they came into competition with deer... and immediately adjacent to horticultural operations... Harvesting the crops [on Hardware Ranch] for use by game is an attempt to reestablish their wintering habits to this section and away from the foothill farm lands where numbers of game must be determined by the tolerance of the landowners."



The Division has conducted a winter elk feeding program at HRWMA since the winter of 1947, and it has grown into a major public winter attraction in northern Utah.

Research on elk at HRWMA started in the 1950's focusing on elk twinning, immobilization drugs, calving dates, winter weight loss, pregnancy rates, migration routes, disease monitoring, and elk herd age structure. In the past, this program has involved trapping elk to obtain information on weights, calf sex ratios, age structure, pregnancy rates, disease testing, and tagging. As part of monitoring the "spike-only" hunting area, pregnant cows were sometimes kept during the spring and summer to record data on calving dates, calf weights and sex ratios. Current elk management activities focus on disease testing and monitoring the condition of the elk.

3.3.2 Mechanism of purchase

HRWMA was created on private lands purchased with a series of grants from the U.S. Fish and Wildlife Service between 1940 and 1964. The source of funding was a Federal Assistance Grant W-12-L under the Federal Aid in Wildlife Restoration Act of 1937 (Wildlife Restoration Act). The initial land acquisition for HRWMA began with the purchase of 2,336 acres in 1945. Additional purchases of 160 acres in 1946, 5198 acres in 1948, 2,275 acres in 1966, 2228 acres in 1976, 800 acres in 1985, 644 acres in 1989, and some donations of small parcels brought HRWMA to approximately 14,400 acres. A land exchange between the Division and Coldwater Ranch, finalized with a U.S. Fish and Wildlife Service Environmental Assessment in 2005, eliminated some in-holdings on HRWMA and resulted in the sale of approximately 122 acres to Coldwater Ranch. HRWMA is currently about 14,278 acres.

3.3.3 Livestock grazing

Livestock grazing was historically conducted on the properties that became Hardware Ranch, and has been adapted as habitat conditions and wildlife needs have changed over time. Utah Administrative Rule R657-28 allows grazing on Division lands to improve wildlife habitat, and prescriptive grazing continues at HRWMA as one of many tools to improve wildlife habitat.

A Grazing Advisory Board periodically reviews habitat objectives and grazing practices and treatments. A description of the livestock grazing program at HRWMA is included at Appendix C.

3.3.4 Compatibility with Local Government Plans, Zoning and Land Use Ordinances

HRWMA is located in the Forest Recreation Zone District (FR40) of Cache County. Public and Institutional Facilities are a conditional use in the FR40 Zone. However, Section 17.01.030 of the Cache County Code provides, "To the extent provided by law, properties owned and operated by the State of Utah or the federal government shall be exempt from the provisions of this title. [Title 17, Cache County Zoning Regulations].

3.4 General Purpose of State Wildlife Management Areas

3.4.1 Key wildlife species

The key wildlife species at HRWMA are elk (*Cervus Canadencis*), mule deer (*Odocoileus Hemionus*), sage grouse (*Centrocercus Urophasianus*) and Bonneville cutthroat trout (*Oncorhynchus Clarki Utah*). In the context of this plan, key species are considered major determinants of the management direction of the WMA. The key species were selected based on conservation and public interests. While wildlife management emphasizes these species, maintenance of healthy habitats supports a variety of wildlife, including sensitive species.

3.4.2 Wildlife and Habitat Management

Each of the over 100 Utah wildlife management areas operated by UDWR, including HRWMA, was established with at least one of four primary objectives in mind:

- » To secure and enhance critical foothill habitats for wintering big game;
- » To preserve fish and wildlife habitat along important stream corridors;
- » To provide nesting and migration habitats for waterfowl;
- » To provide access for fish and wildlife enthusiasts.

Management at HRWMA focuses on improving big game winter range, fish and wildlife habitat preservation, and providing access for hunting, fishing, wildlife watching and wildlife conservation outreach activities.



4.0 Current Management Conditions And Trends

Management activities at HRWMA focus on four primary areas: wildlife and habitat management; outreach; administrative programs; and property and facilities management.

4.1 Wildlife and Habitat Management

4.1.1 Management Context

Management of the wildlife and resources of HRWMA takes place within the larger context of State- and region-wide goals and objectives. The Division has established five regions to coordinate wildlife management in Utah and HRWMA is in the Northern Region. Eight Wildlife Management Units (WMUs) are identified in the Northern Region to provide site-specific wildlife and habitat management, and HRWMA contributes to some of those WMU objectives. HRWMA is located in both the Cache and the Ogden WMUs, which together encompass hundreds of square miles in Northern Utah (see Figure 1, HRWMA Wildlife Management Units).

Various state-wide wildlife management plans for species have an influence on management activities. These plans include: mule deer management plan, elk management plan, moose management plan, beaver management plan, predator management plan, watershed management plan and the wildlife action plan. There are also several species conservation agreements in which the UDWR and other signatories have agreed to reduce threats to species conservation. Examples include the Bonneville Cutthroat Trout Conservation Agreement, the Boreal Toad Conservation Plan and the Sage Grouse Conservation Agreement. See Appendix E, Resources and Information.

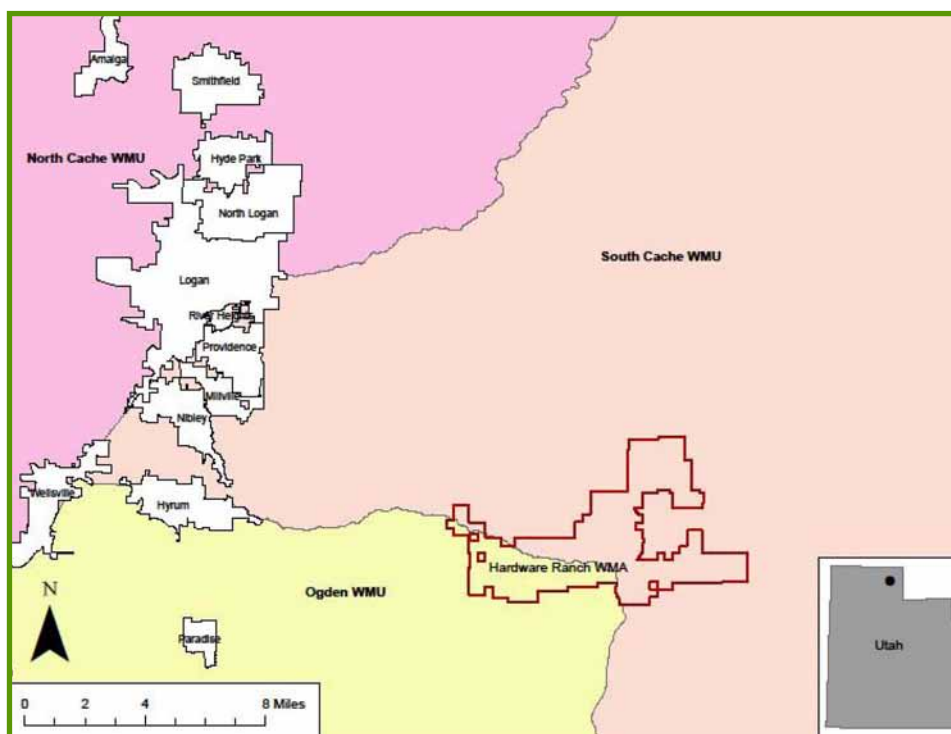


Figure 1. HRWMA Wildlife Management Units

4.1.2 Management Philosophy

Resource management at HRWMA is based on biological inventory, identification of sites that require protection, management of landscapes, and monitoring and assessment of the effects of management practices. Programs are implemented, evaluated and adjusted based on results. This process is often referred to as adaptive management, and key assumptions include:

- » That the long-term objective is to achieve the Division's management goals
- » Recognizing that some changes will occur with or without management
- » That it is necessary to think long-term because most processes occur slowly and actions must be taken now to influence change in the future.



- » Monitoring data needs to be periodically collected and analyzed, and management may be adjusted to reflect the new information.

Resource management at HRWMA follows an ecosystem approach by considering all associated organisms within plant and animal communities. A number of management zones have been designated at HRWMA, and each is managed to meet specific objectives that are developed in cooperation with the habitat, wildlife and aquatics sections. Figure 2 shows the management zones within HRWMA.

Upland management strongly influences the in-stream habitat conditions, riparian succession and quality and wetland function. The streams, wetlands and riparian zones are indicators of ecosystem function, thus the management of land and water resources at HRWMA must be integrated. Habitat and biological evaluations are critical in ensuring management benefits both land and water resources.

4.1.3 Habitat Types

The south and west portion of HRWMA at Blacksmith Fork Canyon is defined by steep, rocky slopes. Ridgeline elevations range from 7,400 to 6,700 feet. The north facing slope of this canyon has classic moist soils dominated with conifer cover. This area has good big game summer range with vegetation that consists of Douglas fir (*Pseudotsuga menziesii*); mules ear, (*Wyethia mollis*); arrow leaf balsamroot (*Balsamorhiza sagittata*); western yarrow (*Achillea millefolium* L); silver lupine (*Lupinus albifrons Benth*) and aster (*Lupinus albifrons Benth*).

The rocky, dryer south facing slope of Blacksmith Fork Canyon has coarse soils and associated brush communities that provide critical winter range for mule deer (*Odocoileus hemionus*). Ridgeline elevations range from 6,700 to 7,400 feet. Native vegetation ranges from mountain big sagebrush, (*Artemisia tridentata*), to Utah Juniper (*Juniperus osteosperma*). Grasses include Sandberg bluegrass, (*Poa secunda*); and bluebunch wheatgrass, (*Pseudoroegneria spicata*). The Blacksmith Fork River and riparian area define the canyon bottom with an average elevation of 5,550 feet.

At the east end of Blacksmith Fork Canyon, the slope decreases to form the meadow areas of HRWMA. The centrally-located hay meadow portion of the WMA is at 5,700 feet in elevation and is irrigated to produce hay to feed elk in the winter. The hay is predominantly timothy grass. Curtis Creek and Rock Creek form confluences with the Blacksmith Fork River in the meadow areas. Riparian vegetation is abundant in these river corridors. Wet meadows also exist with vegetative cover including sedges (*Carex sp*), willows (*Salix sp*) and spikerush (*Eleocharis R. Br*),

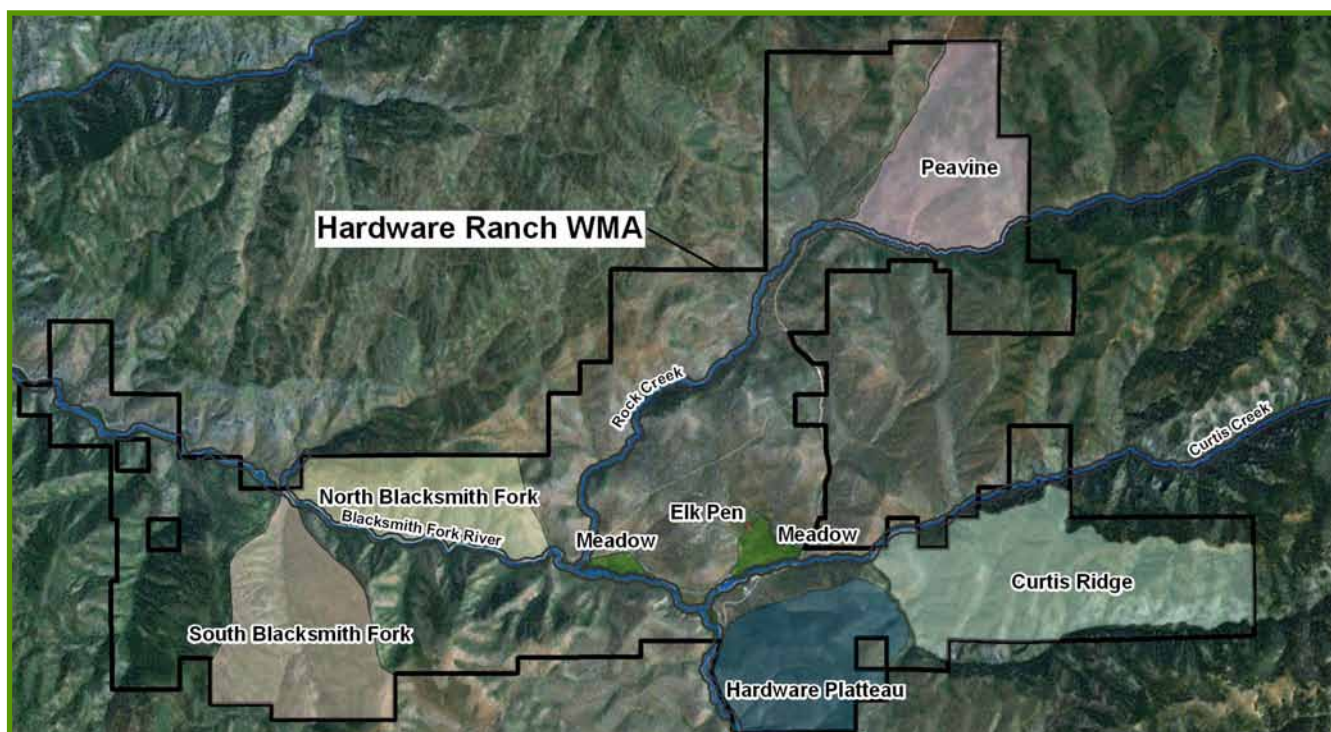


Figure 2. HRWMA Management Zones

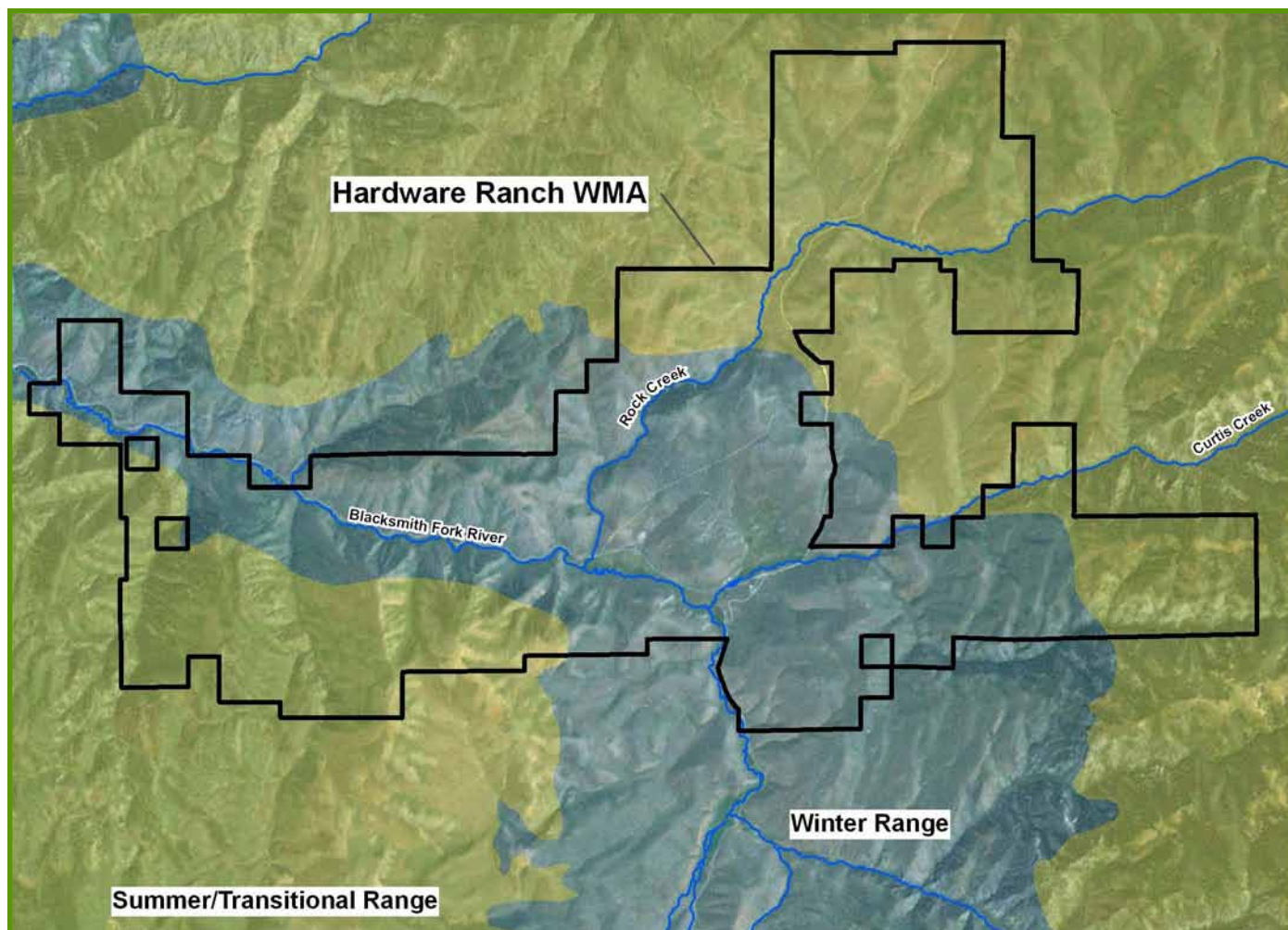


Figure 3. HRWMA Range Types

At the southeast end of the meadow area, slopes rise to the south to form the Hardware Plateau. This dryer transitional/winter range is at approximately 6,300 feet, and is defined by predominately brush and grass plant communities interspersed with junipers. Native shrubs include antelope bitterbrush, and big sagebrush, with a mixing of Utah Juniper. Grasses include sandberg bluegrass and bluebunch wheatgrass.

The southeast portion of HRWMA is defined by the Curtis Plateau. This section of the WMA has a high point of 7,050 feet in elevation, and is covered with a mosaic of aspen (*Populus tremuloides*), mountain brush, forb and grass communities. The eastern portion of this area contains a smaller area of summer range with aspen and Forbs including mules ear, arrow leaf balsamroot, western yarrow, silver lupine, and aster. The remainder of this area of HRWMA is transitional range. North facing slopes have vegetative cover of Utah Juniper, curl leaf mountain mahogany (*Cercocarpus ledifolius* Nutt.), pinyon pine (*Pinus Edulis*), big sagebrush, antelope bitterbrush, big tooth Maple (*Acer grandidentatum*), Serviceberry (*Amelanchier* Medik.), snowberry (*Symphoricarpos* Gray), Oregon grape (*Berberis repens*), and Rabbitbrush (*Chrysothamnus* Nutt). Curtis Creek flows at the base of the plateau and has classic cottonwood (*Populus deltoides*) and willow communities.

The Rock Creek Drainage is the northernmost portion of the WMA. The elevation of Rock Creek is 5,640 feet at its confluence with the Blacksmith Fork River. At the Northeast end where it enters the WMA, Rock Creek is at 6,600 feet in elevation. This portion of the WMA is primarily winter and transitional range. There is a smaller piece of summer range referred to as Peavine. Vegetation in the Rock Creek Drainage of the WMA includes: Aspen, Utah Juniper, curl leaf mountain mahogany, Pinyon Pine, Willow, Mountain big sagebrush, Antelope Bitterbrush, Big tooth Maple, Serviceberry, Snowberry, Oregon grape, Rabbitbrush, Mules ear, Arrow leaf Balsamroot, Western yarrow, Silver lupine, Aster and willow.



4.1.4 Habitat Limitations

Water availability and distribution, precipitation cycles and steep rocky terrain are the top natural limiting factors for HRWMA for terrestrial habitats.

In-stream habitat along the Blacksmith Fork River is generally suitable to support strong salmonid populations. The riparian area adjacent to the Blacksmith Fork River has been heavily disturbed by vehicle and recreational access. Rock and Curtis Creeks have areas of good habitat within riparian exclosures. Unprotected reaches have been subjected to extensive grazing and vehicular disturbance. Beaver populations have been allowed to expand and have begun to alter habitat along upper Rock Creek and Lower Curtis Creek.

All areas require continuous monitoring and improvement. Biological evaluation is based on a WMU landscape scale, except for specific projects or programs, and this level of evaluation has been adequate for routine assessments and decisions.

4.1.5 Riparian and Aquatic Resources

The HRWMA contains approximately 15 miles of streams and rivers, including segments of Curtis Creek, Rock Creek and the Blacksmith Fork River. The Division has developed a system to classify rivers, streams, and other water bodies according to criteria based on aesthetics, natural character, productivity, biological function, and public accessibility. Class 1 is the highest level; Class 6 is the lowest quality classification.

Curtis Creek originates approximately 6 miles southeast of the headquarters compound on U.S. Forest Service lands, and approximately 3 miles of the stream runs through HRWMA. It is a Class 3 fishery containing rainbow trout (*Oncorhynchus Mykiss*), brown trout (*Salmo Trutta*), Bonneville cutthroat trout and sculpin (*Cottus Bairdii*). Extensive habitat impacts and manipulations have occurred on Curtis Creek over time including habitat degradation due to livestock and wildlife grazing, the construction of weirs to reduce erosion in the 1990's and channel reconstruction in 2001. The objective of the 2001 restoration project was to improve water quality by reducing erosion and organic matter entering the stream.

Rock Creek originates on Forest Service land approximately 8 miles northeast of the headquarters compound and approximately 5 miles of the stream flows through the HRWMA. It is a class 3 fishery and contains brown, cutthroat, and brook trout; and sculpin.

Blacksmith Fork River originates approximately 4 miles southeast of the headquarters compound and 6 miles of the river flows through HRWMA. The river is classified as a Class 1 fishery and is considered a Blue Ribbon Fishery from First Dam to the mouth of Rock Creek. The Blacksmith Fork River on HRWMA supports a very dense population of brown trout (approximately 725 fish/km). Mountain whitefish (*Prosopium Williamsoni*) occur at much lower densities (~200 fish/km) with the upper extent of the mountain whitefish population occurring near Camp Wapiti (Burnett 2006). Rainbow trout only occur in 2nd Dam Reservoir. Bonneville cutthroat trout are rarely observed in the Blacksmith Fork River mainstem. Nongame species occurring in the Blacksmith fork include sculpin and mountain sucker.

Bonneville cutthroat trout (BCT) are identified as a Tier 1 species in the Utah Comprehensive Wildlife Conservation Strategy. BCT are also covered under a rangewide and statewide Conservation Agreement and Strategy, in which overfishing, habitat degradation and fragmentation have been identified as key risks to the long term conservation of the subspecies. Management actions consistent with the Conservation Agreement and Strategy will benefit the fragmented BCT populations that occur on the HRWMA property. BCT population surveys take place every five to seven years to monitor population stability.

The aquatic resources on the HRWMA, such as springs, wetlands and streams also provide potential habitat for northern leopard frog. Potential breeding areas for amphibians also exist in these areas. Tiger salamanders live in some of the water catchments on the WMA.

4.1.6 Wildlife Resources

Big Game

Elk are typically found on the HRWMA in fall and winter. Animals begin to arrive in October, and winter on feed rows on and around the upper meadow complex. These elk are the primary reason that the Division owns and maintains the HRWMA. Numbers of wintering elk range from about 450 to 650 individuals depending on winter severity.



Deer can be found on the ranch all year long, primarily in the higher elevation and mountain brush areas in summer, and on south facing brushy slopes in winter. Wintering areas on HRWMA are important to the overall management objectives for the Cache and Ogden management units. Numbers of wintering deer range from 500 to 1,000. Moose (*Alces alces*) are found on the HRWMA year, round and are usually located at higher elevations in river corridors in the summer and fall, and in stands of Curl-leaf mountain mahogany in the winter.

Groups of pronghorn (*Antilocapra americana*) are found within five miles of HWRMA, and they may become common in the area as well. The pronghorn population core generally occurs in Rich County, but small numbers of individuals will occasionally use habitat on the HRWMA. For example, HRWMA supported a small number of pronghorn over the summer in 2010.

Upland Game

Mountain cottontail rabbits (*Sylvilagus nuttalli*), sage grouse (*Centrocercus urophasianus*), chukar partridge (*Alectoris chukar*), mourning doves (*Zenaida macroura*), wild turkey (*Meleagris gallopavo intermedia*), dusky grouse (*Dendragapus obscurus*) and ruffed grouse (*Bonasa umbellus*), and sandhill cranes (*Grus canadensis*) are found on the Ranch. There are two known sage grouse leks located on the HRWMA, both of which are monitored annually.

Waterfowl

Some waterfowl are found on the Ranch seasonally. Common species observed are mallard (*Anas platyrhynchos*), common golden eye (*Bucephala clangula*), and green-winged teal (*Anas crecca*).

Other Wildlife

Cougar (*Felis concolor*), bear (*Ursus americanus*), bobcat (*Lynx rufus*), badger (*Taxidea taxus*), weasel (*Mustela nivalis*), skunk (*Mephitis mephitis*), and red fox (*Vulpes Vulpes*) are infrequently found on HRWMA. Beaver (*Castor Canadensis*) are commonly found on HRWMA and have expanded their range under access management changes, especially on upper Rock Creek.

Non-Game Birds

Numerous species of non-game birds are present on the WMA.

Non-Game Mammals

Numerous species of non-game mammals are found on the WMA.

Amphibians and reptiles

The mountain northwest of the headquarter complex is called "Rattlesnake" because of its historical and present rattlesnake (*Crotalus oreganus*) populations. The riparian areas of the ranch provide amphibian habitat. Growth of beaver dam complexes in recent years has created potential amphibian breeding areas.

4.1.7 Vegetation

Twelve different vegetation, or land cover, types (USGS 2004) occur on HRWMA. These types include mixed conifer, aspen, mountain shrub, mountain riparian, grassland, lowland riparian, pinyon-juniper, shrubbe steppe, and wet meadow. Common vegetation species are shown below:

| Common Vegetation Species on HRWMA | |
|------------------------------------|-----------------------------|
| Category | Species |
| Trees | Mountain Fir |
| | Aspen |
| | Cottonwood |
| | Juniper |
| | Curl Leaf Mountain Mahogany |
| | Pinion Pine |
| Shrubs | Mountain big sagebrush |
| | Bitterbrush |
| | Big tooth Maple |
| | Serviceberry |
| | Snowberry |
| | Oregon grape |
| | Rabbitbrush |



Common Vegetation Species on HRWMA

| Category | Species |
|----------|-----------------------|
| Forbs | Mules ear |
| | Arrow leaf Balsamroot |
| | Western yarrow |
| | Silver lupine |
| | Aster |
| Grass | Germanium |
| | Bluebunch wheatgrass |
| | Slender wheatgrass |
| | Mountain brome |
| | Smooth brome |
| | Kentucky bluegrass |
| | Mutton bluegrass |
| | Prairie junegrass |
| | Sandberg bluegrass |
| | Squirreltail |
| Riparian | Timothy |
| | Willow |
| | woods rose |
| | Spikerush |

4.1.8 Invasive weeds

Cheatgrass (*Bromus tectorum*) is an invasive non-native species from Eurasia, which can dramatically increase fire frequencies and often competes with native grasses. It offers minimal forage value to wildlife for only a brief period in the spring. Invasive weeds other than cheatgrass that are present on HRWMA include Canada thistle (*Cirsium arvense*), Scotch thistle (*Onopordum acanthium*), Leafy spurge (*Euphorbia esula*), Spotted knapweed (*Centaurea maculosa*), Dyer's woad (*Isatis tinctoria*), Medusa head rye (*Taeniatherum caput-medusae*), and Nevski Bulbous bluegrass (*Poa bulbosa*). Herbicide is sometimes applied to portions of HRWMA to suppress these weeds.

4.1.9 Sensitive Species

The Division's current Wildlife Action Plan is entitled the Comprehensive Wildlife Conservation Strategy (CWCS), has identified the species and habitat of greatest conservation need and provides guidance regarding long term conservation needs (UDWR 2005a). CWCS species present at HRWMA include boreal toad (*Bufo boreas*), osprey (*Pandion halieetus*), paiute sculpin (*Cottus beldingi*), northern leopard frog (*Rana pipiens*), sharp tailed grouse, rubber boa and Bonneville cutthroat trout (*Oncorhynchus clarkii utah*). Historical records indicate that northern flying squirrel (*Glaucomys sabrinus*) may have occurred on or near the HRWMA.

4.1.10 Habitat Trends

Habitat trends on HRWMA include:

- 1.) Continuing disturbance and degradation of streams and wet areas due to high levels of unauthorized motor vehicle traffic and un-managed livestock grazing;
- 2.) Spreading and generally increasing invasive weed presence due to vehicle and livestock activities;
- 3.) Recovery of streams and wet areas protected from livestock and vehicles;
- 4.) Prescriptive grazing used to enhance brush communities and reduce wildfire fuels; and
- 5.) Prescriptive burns used to enhance big game habitat.

4.1.11 Human use-related problems

Visitation to HRWMA is primarily recreational. Impacts include:

- » Riparian margins and aquatic areas adversely affected by livestock grazing
- » Unauthorized OHV use in several areas disturbs wildlife and damages infrastructure
- » Campfires in areas that may create fire hazards
- » Incremental encroachment of public camping areas, leading to habitat degradation and infrastructure damage.

In addition, the proximity of SR 101 to the Blacksmith Fork River means that wildlife is often exposed to heavy motor vehicle traffic



4.1.12 Fire Management

Fire is used, as conditions warrant, to improve habitat and remove decadent vegetation growth. Planned burns are coordinated through the Utah Division of Fire, Forestry and State Lands in order to follow strict weather, safety and control measures.

Fire prevention is accomplished by removing fuels, primarily grasses, through grazing practices. Dispersed camping in many areas, especially around roads, has resulted in numerous campfire rings, most of which do not follow fire ring construction and placement away from trees and vegetation to reduce wildfire risks. The Utah Division of Forestry, Fire and State Lands has established guidelines for fire ring construction and placement. Utah Administrative Rule 65A-8 210 places some responsibility on state agencies such as DWR to recognize the need for wildland fire protection and cost-sharing.

4.2 Outreach

4.2.1 Management Context

Similar to wildlife and habitat management, conservation outreach management at HRWMA takes place within the larger context of state and region-wide goals. The Division has identified three goals for the agency, including a constituency goal that relates directly to outreach; “to achieve broad-based support for Division programs and budgets by demonstrating the value of wildlife to all citizens of Utah.” The Division mission and this goal provided the structure for the development of HRWMA outreach goals and objectives found in this plan. In the future, the needs and expectations of our visitors will be integrated. This allows managers to focus conservation outreach efforts and provide meaningful opportunities for the agency and the public.

4.2.2 Management Philosophy

The HRWMA defines conservation outreach as a process that leads participants from awareness to exploration and ultimately to active personal involvement in wildlife conservation.

Conservation outreach provides opportunities for the public to participate in this process with the expectation that by doing so, many of the participants will become hunters, anglers and wildlife watchers and outdoor enthusiasts. Families, will in turn, spend more time outdoors increasing their personal involvement, consequently valuing wildlife and their habitats, becoming stewards of the resource, and supporting the Division.

Personal involvement in wildlife conservation can be quantified by purchasing hunting and fishing licenses, watching wildlife, attending Division events, making personal choices that benefit wildlife, by supporting Division management decisions and contributing financially to the agency.

4.2.3 Conservation Outreach Program Conceptual Framework

Conservation outreach can be divided into: education, interpretation, visitor services, volunteer management and communication, and social networking. Each component can function independently, but when integrated thematically, these parts work together to support a meaningful conservation outreach program. For Utah, the main theme is “wildlife is valuable and contributes to the quality of living in Utah”.

4.2.4 Conservation Outreach Definitions

Conservation Outreach is the “...process that leads participants from awareness to exploration and ultimately to active personal involvement in wildlife conservation.” (Phil Douglass, DNR Outreach Manager) Each component defined below is a tool to achieve the overall goals of conservation outreach.



**Conservation Outreach is a PROCESS that LEADS participants:
From awareness and knowledge---to exploration---to personal involvement and stewardship**

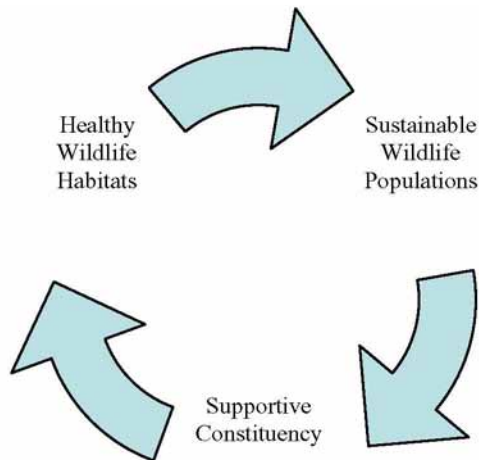
4.2.4.1 Education

At HRWMA, education is split into three groups: school programs, group programs and events. School programs target teachers and students in the public school system, are smaller in size, and are tied to core curriculum



standards for specific grades. Group programs refer to formal education programs that are requested by organized groups. These programs are tied to the themes of the WMA, and include groups such as scouts, senior citizens, church groups, etc. Events target multiple, large groups and ages combined in one setting, such as expos and fairs.

Education programs require reservations, have a formal structure and a set of lesson plans, and are tied to the needs of the visitor as well as WMA themes. All education programs are structured to increase awareness and knowledge through exploration and hands-on activities.



4.2.4.2 Interpretation

Interpretation at HRWMA includes outreach opportunities for the general public. They are less structured than education and target a larger, non-captive and more diverse audience. Interpretation is "...a communication process designed to reveal meanings and relationships of our natural and cultural heritage through firsthand sensory experiences" (Tilden, 1957). It is "pleasurable, relevant, organized and thematic (Ham, 1992). The Rocky Mountain Region Center for Design expands these definitions for the purposes of an agency. "A service provided to enhance visitors' experiences and to provoke and motivate additional learning and discovery. It is also a management tool that can be used to increase visitors' appreciation for, and sensitivity to, the natural and cultural resources of the area." The emphasis at HRWMA is interactive, rather than passive interpretation.

4.2.4.3 Communications

Communication efforts at HRWMA focus on informing the general public about current and future management actions, soliciting input on management actions, and then responding to that input. HRWMA managers encourage two way communication and exchange of information between the public and the Division. The purpose is to provide multiple forums and opportunities to interact with management and the decision making process, or to inform of decisions/actions and the process that led to that decision. Communication at HRWMA also includes administrative site signage and all media efforts that support both management and the conservation outreach program. Mass media and social networking are evolving rapidly and will play an important role in the future. Communication serves the entire conservation outreach process.

4.2.4.4 Visitor Services

Visitor Services at HRWMA refer to those services offered to the public that improve the quality of their experience. Services include restrooms, water, picnic facilities, front desk reception, way finding, ticket sales, telephone reception and information desk. These services provide visitors a level of comfort and security in which to explore Utah's wildlife and the programs we offer. Visitor services provide the basic necessities for a visitor to take the first exploration step, getting them outdoors and experiencing wildlife and wild lands in a welcoming local setting.

4.2.4.5 Volunteer Programs

Volunteer programs at HRWMA can be split into two categories, dedicated hunter volunteers and general volunteers. Dedicated hunters are part of a Division wide program that focuses on habitat related volunteer projects, including education. In return for service, these hunters get hunting benefits. General volunteers refer to all other volunteers not participating in the dedicated hunters program. It is believed that volunteering creates



stewardship - the ultimate step in the conservation outreach process. It provides participants an opportunity to do something for wildlife, and people often feel that they must build something to contribute to the future of wildlife. Volunteers are often used to build awareness, as well as infrastructure and habitat enhancements.

4.2.5 Comprehensive Outreach Plan Development

The original scope of this Management Plan proposed inclusion of an interpretive plan. The planning group and outreach specialists recognized that interpretation is only one of several components of conservation outreach. Additionally, it was determined that an outreach plan integrating education, interpretation, volunteer and plan the outreach section will be limited and efforts focused on the development of goals and objectives. A proposed outline for a comprehensive Outreach Plan can be found in Appendix F.

Winter outreach has been identified as one of the top three priorities at HRWMA and will continue during the development of the Outreach Plan. Each task will align with the outreach goals and objectives outlined in this document, and will also be integrated into future outreach planning efforts.

4.2.6 Background/History

Outreach has been taking place at HRWMA since the first sleigh ride in 1957 with numbers of visitors nearing 50,000 each winter. Interviews with former personnel (Personal communication, Steve Kearn) indicated that free rides and multiple visits each year contributed to this large number. A focal point in the outreach programs at HRWMA came in 1987 when the visitor operations were eliminated as a cost savings measure by the Utah Legislature.

Because of the strong tradition instilled by the sleigh rides and visitor center, the Division and the Legislature sought to reopen the visitor programs by contracting the sleigh rides to private providers. Two such contracts were offered from 1989 until 2003. These contracts included sleigh rides to see the elk, food service, snowmobile services, and lodging. A report to the Natural Resources Committee of the Utah State Legislature in 1996 identified conflicting missions between the contractors and the Division, and concluded that concessionaires tend to be more compatible with "State park" management. It was also determined that changing the nature of HRWMA to be more like a State park would conflict with the original charter, and may not be permissible under the conditions of the original grant.



Figure 3. Historic Public Sleigh Ride Participation



Food services provided by the contractor were popular with the public, but treated by the contractor as “filler” and were not considered to be profitable. Subsequent efforts to provide food services have been unsuccessful, but options to find a suitable level of food service for visitors are considered.

When the last contractor opted not to renew the contract in 2003, the Division purchased the sleighs and restaurant equipment, concessionaire services for the horse program and retained a concessionaire for food service for three seasons, 2003-2005. This effort was unsuccessful in generating profit for the concessionaire and was discontinued. The move away from concessionaires was also an effort to provide programs that are more consistent and compatible with wildlife management and conservation outreach operations.

In the 1990s, the HRWMA was moved from the Wildlife Section to the Outreach Section of the Division. This move placed greater importance on outreach as a management component of the WMA. In 2003, an assistant manager was hired with a job description tied more closely to outreach, and was charged to increase outreach programming; especially education programming correlated to state school science standards.

4.2.7 Current Outreach Programs and Resources

Since the first sleigh ride was offered at Hardware Ranch WMA, outreach efforts have expanded and evolved. Currently HRWMA offers a variety of outreach opportunities, from the traditional sleigh ride and school programs, to events. A complete list of outreach programs can be found in Appendix I.

The current strength of the outreach program at HRWMA is the personal messages delivered by the drivers during the sleigh rides, and the naturalist-led education field trips for schools. Media programs also serve the WMA by maintaining public interest in the wildlife traditions at HRWMA.

4.2.8 Staffing

Currently, the Assistant Manager position at Hardware Ranch WMA is approximately 90% dedicated to outreach management, and takes the lead on outreach development, implementation and reporting. Responsibilities include all components of the education and interpretive programs and assisting the Ranch Manager in volunteer efforts. The remaining 10 % is dedicated to general WMA management

The Ranch Manager position focuses on all WMA operations. Outreach responsibilities include; supervising the Assistant Manager, managing winter sleigh rides, developing and implementing media and administrative signage, and identifying volunteer opportunities.

Both managers share in efforts to recruit, train and supervise additional outreach staff and maintenance facilities and grounds.

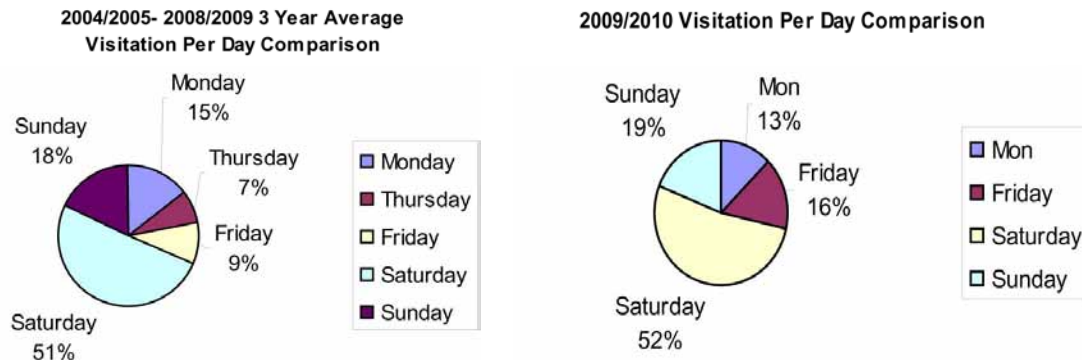
4.2.9 Trends and Data

There is little outreach data or research compiled and synthesized into usable formats before 2003. Available data is represented in Figure 3. This is due in part to limited staffing resources to conduct research and collect data generally associated with outreach programs. It is felt this data is sufficient to show current trends since reorganization of the HRWMA into the Outreach Section of the division.

Prior to the 2004 winter season, HRWMA was open during the winter season 7 days a week. Due to personnel shortages and low visitation during the week, HRWMA was closed Tuesdays and Wednesdays starting in 2004. Days of operation for sleigh rides and the Visitor Center were reduced again in 2009 to Friday, Saturday, Sunday and Monday as part of the Governor’s four-day work initiative. However, the WMA functions 7 days a week during the winter in order to feed elk and horses, clear snow, and maintain equipment, facilities and programs.

The charts in Figure 4 show visitation by day of the week. The numbers are derived from sleigh ride sales, with the assumption that most of our visitors purchase tickets and take the ride.

Outreach numbers, other than the winter sleigh rides, are recorded at each individual program and synthesized into yearly outreach reports. Some outreach programs have occurred yearly since 2003 while others are intermittent.



Figures 4. HRWMA Visitation by day of the week.

4.3 Programs and Activities

The three main priorities at HRWMA are:

- 1.) Winter feeding of elk,
- 2.) Fostering healthy habitat and,
- 3.) Conducting an effective winter outreach program connected to the winter elk feeding program.

These priorities were developed in connection with the Division's mission and goals, as well as the purposes stated in the grant from the U.S. Fish and Wildlife Service. The staff at HRWMA have direct and sole responsibility for carrying out these priorities. The activities and programs listed below may involve direct participation from HRWMA staff, but also may involve other agencies and management sections within the Division and are done in coordination with the HRWMA staff.



4.3.1 Elk Disease Testing

Because of the impact brucellosis can have on the livestock industry and wildlife populations of the State of Utah, the Division traps a portion of the elk wintering at HRWMA and tests them for the disease. At present, no elk have ever tested positive for brucellosis at HRWMA. Strategies for addressing any brucellosis outbreak are in the Statewide Brucellosis Plan.

4.3.2 Winter Elk Feeding

Portions of the WMA are heavily used by elk during fall and winter, especially the range immediately next to the feeding area on the upper meadow. From late September through December, approximately 200 to 300 elk use the area. From early December to mid-March, the numbers typically increase to a range of 450-600 elk, depending on the weather and snow conditions.

4.3.3 Access Management

The HRWMA is open to the public year-round, and a variety of recreational activities have been allowed on the WMA. Although the Division does not sponsor nor actively manage non-wildlife recreational uses, thousands of people come to the HRWMA property to hunt, fish, camp, hike, view wildlife or enjoy other recreational activities each year. The relatively small size of the property and the diversity of public uses presents serious habitat management concerns. Some restrictions are required in order to meet wildlife and habitat objectives. Seasonal and temporary limits are established when necessary to avoid damage to habitat and wildlife, facilitate HRWMA programs, or to promote safety. Permanent changes are made based on the need to protect wildlife and habitat.

Access management is complicated by inadequate informational signage and maps at HRWMA. Improved signage is an infrastructure priority because of the volume of visitors, the diversity of uses, and the need to better manage potential user conflicts. Maps and materials developed in this planning effort may be used to address this problem.



4.3.3.1 Camping Access

The Division does not typically allocate agency resources for campsite improvements at wildlife management areas because camping activities are generally short duration, during hunting seasons. Although there currently are no designated sites at HRWMA, public camping is allowed in some areas for 14 days at a time. After 14 days, the camp/trailer must be removed from the WMA for at least 1 full day.

Camping is one of the activities reviewed for compatibility with the mission and goals of the WMA. It was identified as a traditional use, but increasing encroachment and the resulting impacts to habitat and wildlife have been repeatedly identified as a problem over the past 20 years. The majority of the camping on HRWMA is via trailer and truck-mounted campers, many of which are accompanied by auxiliary vehicles such as OHVs or motorcycles. Illegal and improper use of OHVs exacerbates the damage caused by the primary vehicles.

Camping generally begins in the early spring and continues through the late-fall hunting seasons. The most heavily used campsites are adjacent to waterways including riparian areas, and the location, intensity, and duration of camping activity has damaged important riparian habitats by vegetation removal and soil compaction. Water quality may be degraded by increased erosion and fine sediment inputs from unvegetated areas. Vehicular camping is particularly intense along the Blacksmith Fork River.

All campsites at HRWMA were identified and evaluated as part of this planning process. As a result, some areas will be closed to camping, others will be modified, and several campsites will be converted to day use areas, which precludes all camping and limits use to single day use. Camping access will be designated with signs, and notices will be published in key publications such as the Utah Hunting and Fishing Guides. Maps that show camping and access areas are found in Appendix A.

4.3.3.2 OHV Access

According to a 2008 study conducted by the Institute for Outdoor Recreation and Tourism:

"The use of Off-Highway Vehicles (OHVs) for recreation and other outdoor activities has exploded in popularity over the past several decades. The number of registered OHVs in Utah has more than tripled ... up from 51,686 in 1998, to 172,231 in 2006, a 233% increase. This increase has brought the issue of OHV use and management to the forefront for land management agencies in Utah."

The HRWMA serves as one of 3 local trailheads on the federally-designated Shoshone trail, and is open year round for motorized vehicle use.

The only authorized OHV routes on HRWMA are the Ant Flat Road, USFS Road 54; and the Pole Hollow Road (USFS Road 150), which is closed from September 15 thru May 15. Use of OHVs and snowmobiles in unauthorized areas is a major concern on the HRWMA because it damages wildlife, habitat and infrastructure. Utah law generally prohibits snowmobiles and other OHVs from operating on paved roadways; however it is common to find OHVs driving on SR 101 as campers move up and down Blacksmith Fork Canyon. The problem is particularly acute on holiday weekends and big game hunting season openings.

The Utah Division of Parks and Recreation maintains a trail snow-grooming machine at HRWMA and grooms part of over 180 miles of trail during the winter. They also maintain a 1-acre parking lot and two chemical toilets adjacent to the sleigh line and paved parking lots.

Parking at HRWMA is limited, and there is sometimes competition for parking spaces among snowmobilers and horse-drawn sleigh riding visitors during the peak of the winter season. Patrolling and enforcement is required to ensure that OHV and snowmobile users stay on designated trails, particularly in the winter when large herds of elk are present. Camping-associated OHV use is also contributing to habitat degradation and safety and traffic concerns.

4.3.3.3 Hunting and Fishing Access

Hunting, fishing and wildlife viewing activities are core recreational activities on HRWMA, and trace back to the original WMA charter. They are subject to the general Division hunting and fishing guidebooks and seasons. Elk, moose, and deer can be hunted on all but about 1,000 acres of HRWMA. The Blacksmith Fork River and Curtis and Rock Creeks are open year round to fishing. Based on the 2005 Statewide Angler Survey, approximately 25,000 angler days were spent fishing on the Blacksmith Fork River (Lilieholm et al. 2006). Upland game hunting includes forest grouse (both ruffed and blue), chukar partridge and turkeys.



4.3.4 Safety

Safety is the foremost operational concern at HRWMA. The thousands of visitors, coupled with aging facilities and the necessity to operate with the public during extreme cold and snow, all impose significant safety considerations. The horse-drawn sleighs and a very active OHV trail also present public safety challenges.

4.3.5 Volunteer Programs

The volunteer effort at HRWMA is primarily based in the Division's dedicated hunter program, which offers participants enhanced hunting opportunities in exchange for work on wildlife conservation projects and other maintenance. The program has actively promoted trades people to provide volunteer services at HRWMA, and has resulted in significant facilities improvements with minimal direct funding. When volunteer projects require funding, the current expense budget is used.

4.3.6 Academic Studies

HRWMA has a history of cooperating with Utah State University (USU) to provide a venue for research and study on the facility.

4.3.7 Adjacent property owners

HRWMA is bordered by several private properties and USDA Forest Service (USFS) managed lands. See Appendix A for HRWMA maps. HRWMA is located in a historic crossroad where major routes meet at the top of Blacksmith Fork Canyon. Most of the southern boundary of HRWMA abuts private land, where seasonal livestock grazing is conducted. The northeast boundary of HRWMA (Pea Vines) is abutted by several smaller property owners, and is in mostly private recreational use with very limited public access. Most of the north and west boundary abut USFS lands, with the exception of a few sections of private property. There are three private in-holdings in HRWMA, each of which is approximately 40 acres and is used primarily for recreation. Portions of State Road 101 east, USFS road 054, and the Shoshone year-round OHV trail run through HRWMA.

Impacts to adjacent properties have included accidental trespass by livestock used by grazing permit holders operating on HRWMA, trespass by recreational users on HRWMA as they hunt, fish, camp, and ride near the property boundary; and damage to roads and trails by uncontrolled vehicular access during 'wet' months. Most impacts are minor and relationships with the neighbors of HRWMA are generally good.

4.4 Property and Facilities Management

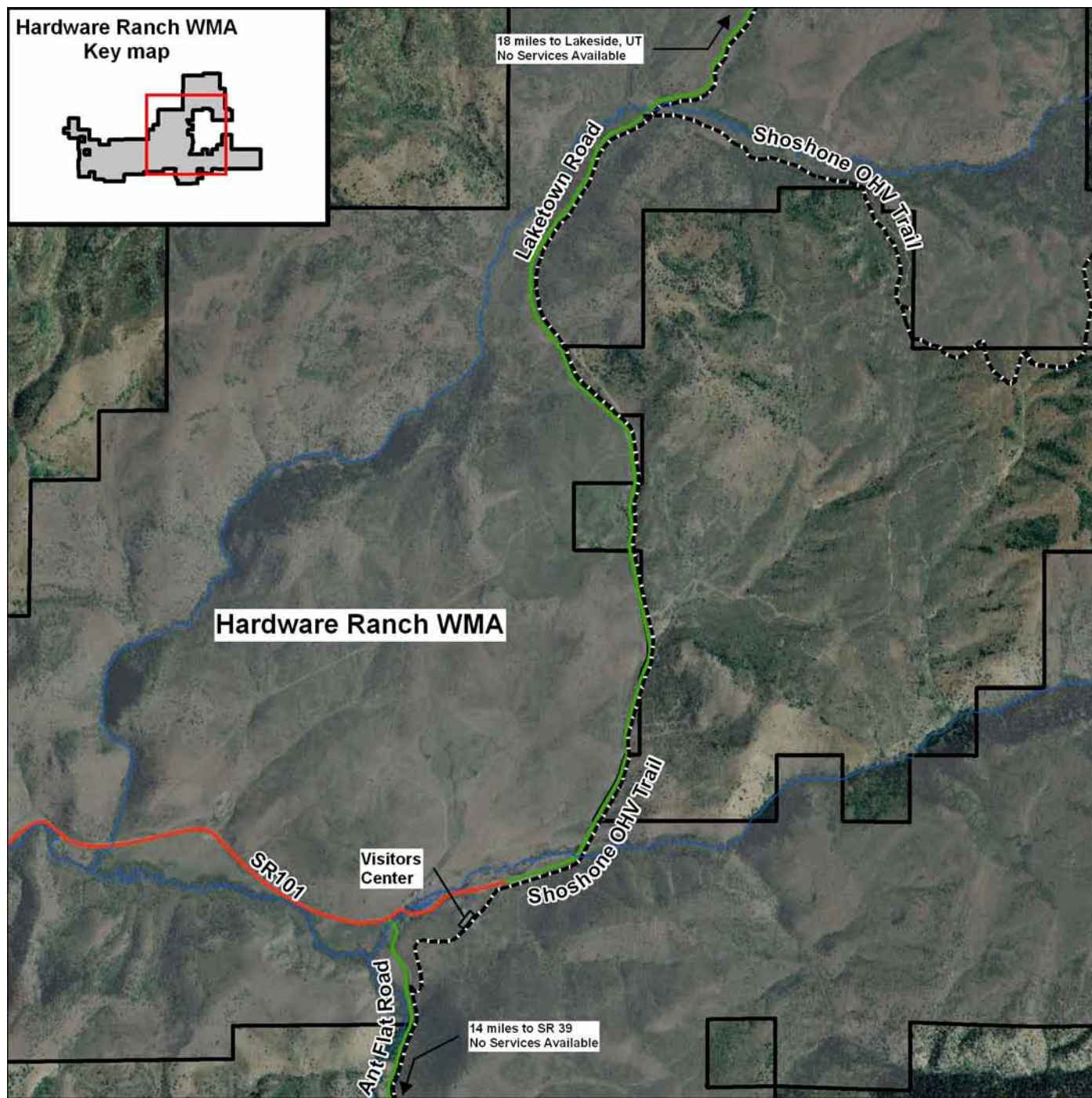
A number of basic operational activities are required to support HRWMA. They include managing property, operating facilities and heavy equipment, and maintaining a management staff. The capital improvements at HRWMA are summarized in Table 1, below.

4.4.1 Roads

State Route 101 runs through the center of HRWMA to the headquarters area. The highway turns to gravel as it continues through HRWMA and becomes USFS road 054. Although the road is a State Route, it is maintained by Cache County. A spur road originates in the area of Rock Creek and runs east toward Baxter's Sawmill. These roads provide vehicle access thru parts of HRWMA. The Ant Flat road runs south from the ranch headquarters to SR-39 and approximately 2 miles of it are within HRWMA. An access road has been cut off the Ant Flat road up the hill to the east, to allow snowmobiles and OHVs to continue on the Shoshone Trail without illegally riding on SR101. Pole Hollow Road, Forest Route (FR) 150, is a US Forest Service road that is also open to OHV traffic between mid-May and mid-September. An administrative access road to the elk trap and irrigation canal behind the barnyard is approximately 0.5 miles long (See Figure 5).

4.4.2 Fences

There are over 33 miles of fence on HRWMA. About 20 miles are 4-wire boundary fence and the 13 miles of interior fence is 2 rail pole, barb wire, or 8-foot tall enclosure fence. Due to livestock grazing, big game traffic, and aging fences, repair and maintenance is a major ongoing responsibility. Many of the fences have been built and maintained with grazing assessment fees. Each season, tasks associated with grazing include repairing existing fence, removing abandoned fencing, and building new fences to protect sensitive resources and control livestock. The approximately 8 miles of pole fence averages between 10 and 20 years old and requires considerable maintenance. Much of the pole fence is degraded due to rotting posts and rails.



Source: Utah State Geographic Information Database, ESRI, 2009.

Key

-  Hardware Ranch WMA
-  Highway 101
-  Shoshone OHV Trail
-  Dirt Roads

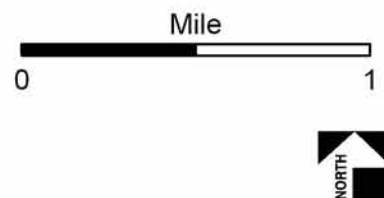


Figure 5. HRWMA Roads and OHV Trails



The 2 major big game enclosure fences are on lower Curtis Creek from the sleigh shack to the bunkhouse (0.5 mile), and the old elk pen pasture fence (1.5 miles). The elk pen pasture fence is in extremely poor condition, and requires frequent repair. Its major use is now summer pasture for the ranch draft horses. The enclosure fence along Curtis Creek is in excellent condition.

In spring of 2009, five linear miles of fence was built along Rock Creek, east of the Back Country Horsemen's corrals to protect the creek from livestock grazing and vehicle damage. This completed work prescribed in a 1998 planning document, and leaves only about 1 mile of Rock Creek on the WMA left to fence to protect from livestock damage.

4.4.3 Facilities and Equipment

HRWMA encompasses approximately 14,278 acres of land, major facilities including 13 buildings, 150,000 square feet of paved parking lots and sidewalk, 33 miles of fence, 2 miles of waterlines, 8 miles of commercial electric transmission lines, and many miles of roads and trails. Some of the buildings, fences and electric lines are now 50 years old. The buildings are in generally good condition but are showing age and require increasing repair.

The visitor center, built in 1972 has recently undergone structural repair. Electric power for the visitor's center, residences, and ranch out-buildings is provided by Rocky Mountain Power to the edge of the HRWMA boundary. Maintenance of the distribution system from that point is the responsibility of HRWMA, and includes over 8 miles of transmission lines. Telephone and internet services to HRWMA come via radio transmitter and are distributed over land lines and wireless systems. The communications system on the WMA has been significantly improved since 2005 since the old microwave relay was replaced with a radio relay and improved digital systems.

Table 1. Capital Improvements at HRWMA.

| Item | As of 2010 |
|-------------------------------|--|
| Fence | 33 miles |
| Cattle guards | 6 |
| Residences | 3 |
| Gate Openings | 43 |
| Bunkhouse | 1 |
| Water Control Structures | 15 |
| Roads | 18 miles |
| Sidewalk | 1,200 feet |
| Signs | 5 |
| Canal | 2 miles |
| Visitor's Center | 1 |
| Barns | 2 |
| Sheds | 2 |
| Shops | 1 |
| Pump station | 1 |
| Electrical transmission lines | 8 miles |
| Telecommunications | Radio relay to analog to digital systems |
| Classroom building | 1 |
| Hay pastures | 120 acres |
| Animal Handling Facilities | Elk pens/ corrals |
| Culinary water line | 2 miles |

The buildings on the WMA are subject to the Wildlife Inventory Management system (WIMs) and are detailed in the table below.

WMA Facilities

| Building | Description | Condition | Current utilization | Comments |
|-----------------------------|------------------------|-----------|------------------------|---|
| Superintendent residence | 2,600 sf brick rambler | Excellent | Residence/office | Supports management sleigh rides/ habitat/ outreach |
| Assistant manager residence | 1,850 sf | Very good | Residence | Supports sleigh rides/outreach programs |
| Cottage | 960 sf | Good | Residence for seasonal | Supports outreach programs |



WMA Facilities

| Building | Description | Condition | Current utilization | Comments |
|--------------------|------------------------|-----------|---|---|
| Bunkhouse | Unit 1- 350 sf, 1 bdrm | Fair | Residence | |
| | Unit 2 -700 sf, 2 bdrm | Fair | Drivers overnight in winter Seasonals day use DWR personnel | Supports sleigh rides |
| Visitor center | 5,600 sf | Good | Winter outreach & other education programs | Supports sleigh rides/outreach programs |
| Auxiliary building | 1,600 sf | Fair - | Office/ Classroom | Supports outreach programs |
| Tack shed | 800 sf | Excellent | Harness | Supports sleigh rides |
| Tractor shed | 800sf | Excellent | Tractor | Supports hay & elk feeding |
| Breezeway | 1,800sf | Excellent | Work area/ storage | Supports maintenance |
| Shop | 850sf | Good | Tools/welding | Supports maintenance |
| Barn | 5,000sf | Good | Storage | Supports maintenance program |
| Storage | 2,500sf | Good | Hay | Supports hay & elk feeding |
| Sleigh shack | 240sf | Fair | Drivers day ops (winter) | Supports sleigh rides |
| Hay shed | 5,400 | Excellent | Hay | Supports hay & elk feeding |

4.4.4 Hay Meadows

There are 2 meadow complexes at HRWMA, together comprising approximately 120 acres. About 110 acres are harvested as the primary feed for the winter elk feeding program. The upper meadow is 73 acres, the middle meadow is 13.5 acres and the lower meadow is 33.5 acres. A smaller parcel of 6.5 acres exists between the middle meadow and Ant Flat Road. An additional 7.5 acre parcel exists on the west side of the upper meadow that is unharvestable due to construction of dikes to divert runoff from the barn yards. Hay production requires fertilizing in the spring as well as paying to have the hay harvested. In the past, the meadow hay had been adequate to sustain the wintering elk. Since 2005 it has been necessary to purchase additional hay for the elk, as well as to support the feeding of draft horses required for the winter outreach program. Hay production is a primary objective and discussions to improve production are continuing.

Hay Production on HRWMA 2005-2010

| Year | Tonnage | Fertilization | Irrigation |
|------|---------|--|------------|
| 2000 | 414.75 | 100 units ammonium Nitrate & 30 units ammonium phosphate & 25 units Ammonium sulfate | |
| 2001 | 334.80 | Same | May-June |
| 2002 | 318 | Same | May-June |
| 2003 | 273.5 | Same | May-June |
| 2004 | 280.7 | Same | May-June |
| 2005 | 143.91 | | May-June |
| 2006 | 89.63 | 45 units urea | May-June |
| 2007 | 120.38 | 60 units urea per acre | May-June |
| 2008 | 239.02 | Same | May-June |
| 2009 | 193.29 | Same | May-June |
| 2010 | 209 | 70 units urea & 30 units pot ash per acre | May-June |

Notes:

Harvest is on approximately 110 acres of meadow

Fertilizer is applied the 2nd week in May

Irrigation begins as soon as the meadow is worked in the spring and lasts about 60 days.

Irrigation ends 6 days prior to harvest to allow the ground to dry for equipment

Harvest date is the second week in July

Water following harvest is intermittent based on availability.

December through 28 February.

The irrigation canal was cleaned and improved in 2008 and new headgates were added. The water distribution system below the canal is still being improved as 'washed out' ditches are being filled and replaced.

In 2007 about 15 acres of the upper meadow complex damaged by winter sleigh rides was inter-seeded with forbs and legumes and restored production to that area. A rotation system to move sleigh rides to other areas of the meadow has helped limit damage to the meadow. The sleigh rides now run from mid-D



4.4.5 Water Developments

Water developments and improvements on HRWMA include springs and ponds, and a recent irrigation improvement project that repaired or replaced approximately 1 mile of canal along the 2 large meadow complexes. Annual maintenance of irrigation ditches and diversions is an ongoing task to ensure maximum hay production. The irrigation system includes 2 diversion points on Curtis Creek, which are tied to 3 original 'priority' water rights on the Blacksmith Fork River dating from May 1870. Old distribution system ditches are being filled and new ditches are being cut to improve irrigation on the meadow. The feasibility of using herbicide to kill grass in the canal is being investigated. There are 15 ponds on HRWMA, including 5 installed to divert spring runoff away from the barnyard. Ten of the ponds also enhance both wildlife watering opportunities and water availability for the WMA livestock grazing program. Since 2006, five springs have been developed to improve dispersed water locations on Hardware Plateau, Curtis Ridge, and Pole Hollow. There are no water wells in use on HRWMA.

4.4.6 Wood products

No wood products are harvested on HRWMA

4.4.7 Cultural Resources

All development projects on HRWMA are required to comply with the requirements of the State Historic Preservation Officer (SHPO). Fencing and other major infrastructure projects on HRWMA have adhered to Division protocols and policies including site-surveys and document and literature reviews. Some surveys have shown historic use by Native Americans in the area; however no specific sites have been identified on HRWMA.

4.5 Current Conditions and Trends Summary

4.5.1 Wildlife and Habitat Management

Winter feeding of elk and the original conditions of Wildlife Restoration Act grant dollars continue to be the primary function of HRWMA. Prescriptive grazing, dispersed water development, controlled burning, access management, infrastructure development and maintenance are among the primary practices used to improve habitat and benefit wildlife.

4.5.2 Outreach

Outreach efforts continue to focus on the winter sleigh rides and getting families outdoors to enjoy wildlife. The date of the annual Elk Festival has been moved from October to December to provide a better elk viewing experience.

4.5.3 Recreation

Hunting, fishing, and camping have always been popular activities at HRWMA, and fit within the intended purposes of the initial federal aid grant. Proximity to Cache Valley and public demand for recreation has resulted in high levels of recreational use and new activities. The nationally designated Shoshone Trail on the WMA is very active year round, and is one of the primary avenues to recreational access of public lands in Cache and Rich Counties. Heavy recreational use at HRWMA is creating adverse impacts to habitat resources and wildlife in several areas.



5.0 Budgets And Funding

There are two Operations and Maintenance (O&M) budgets for the HRWMA. The primary budget, *Current Expense* is allocated annually and has remained relatively consistent over the last 7 years. O&M funding from the Division Habitat Council is also allocated annually and includes funding about .50 FTE for a wildlife technician position. The tech time is used to work and irrigate the hay meadows, and to maintain habitat infrastructure.

Current O&M requirements already exceed current O&M budgets, and implementation of this Plan may require realigning and prioritizing current activities and programs. Beyond that, any addition to programs or management activities will require its own funding. Funding within the Division is allocated by work plans for sections and employees. Thus, work plans establish the scope of work for sections, programs, WMAs and other activities. Increasing operations or projects at the HRWMA must include specific allocation of effort in the work plans. Additional equipment/service needs are financed by requesting enhancement funding each year. This source has provided significant equipment for safety and operational needs on HRWMA over the last several years.

As of 2011, HRWMA is staffed by two full-time employees and 1.56 FTE of seasonal (temporary) employees, including information technicians, to assist in operating the Visitor's Center and in driving horse-drawn sleighs during the 3-month winter program.

The HRWMA operations are funded from 2 primary internal accounts. The first is General Fund account which includes all current expense, personnel, and facility operation and maintenance costs. Utilities, vehicles and other routine operating expenses can account for about 85% of the expenditures in current expense. Emergencies and other variables can influence these expenditures by as much as 35% of the total budget. Safety needs are funded first, other operational considerations follow. Current expense also funds ranch work, maintenance of the draft horses, visitor amenities, and some other components of the outreach program.

The second source of Division budget support is UDWR Habitat Council funds. The Habitat Council has funded another 0.50 FTE of a seasonal wildlife technician and some recurrent maintenance that is classified as wildlife management area operations and maintenance expenses. Other Habitat Council funding is project-specific; and has provided augmentation to do riparian fencing, water development, re-vegetation, and other habitat projects on the WMA.

Funding from outside the Division budget has been intermittent and generally tied to project proposals submitted to wildlife conservation organizations. Within the last several years the Mule Deer Foundation, the Rocky Mountain Elk Foundation, the National Wild Turkey Federation, and Trout Unlimited have funded either habitat enhancement or outreach projects at HRWMA.

Three primary factors most influencing current budgets are:

- 1.) Increased hay production costs due to a more expensive fertilization regimen required to maximize production;
- 2.) Increased infrastructure to support habitat and outreach projects and programs, particularly fencing, roads and visitor amenities;
- 3.) Change of personnel (FTE) status for the winter program due to increased safety precautions and loss of Parks & Recreation winter seasonal info tech position



6.0 Plan Implementation

This Management Plan identifies and integrates the HRWMA mission and goals and objectives for the next five years. Implementation is based on available resources that are allocated at least 1 year in advance; therefore the proposed implementation of this plan is phased. Benchmarks are listed to track task completion for each goal. The benchmarks are integrated in the annual work program of the HRWMA manager and will be evaluated as part of the annual performance management. Specific implementation tasks and benchmarks are described in Section 2.0, above.

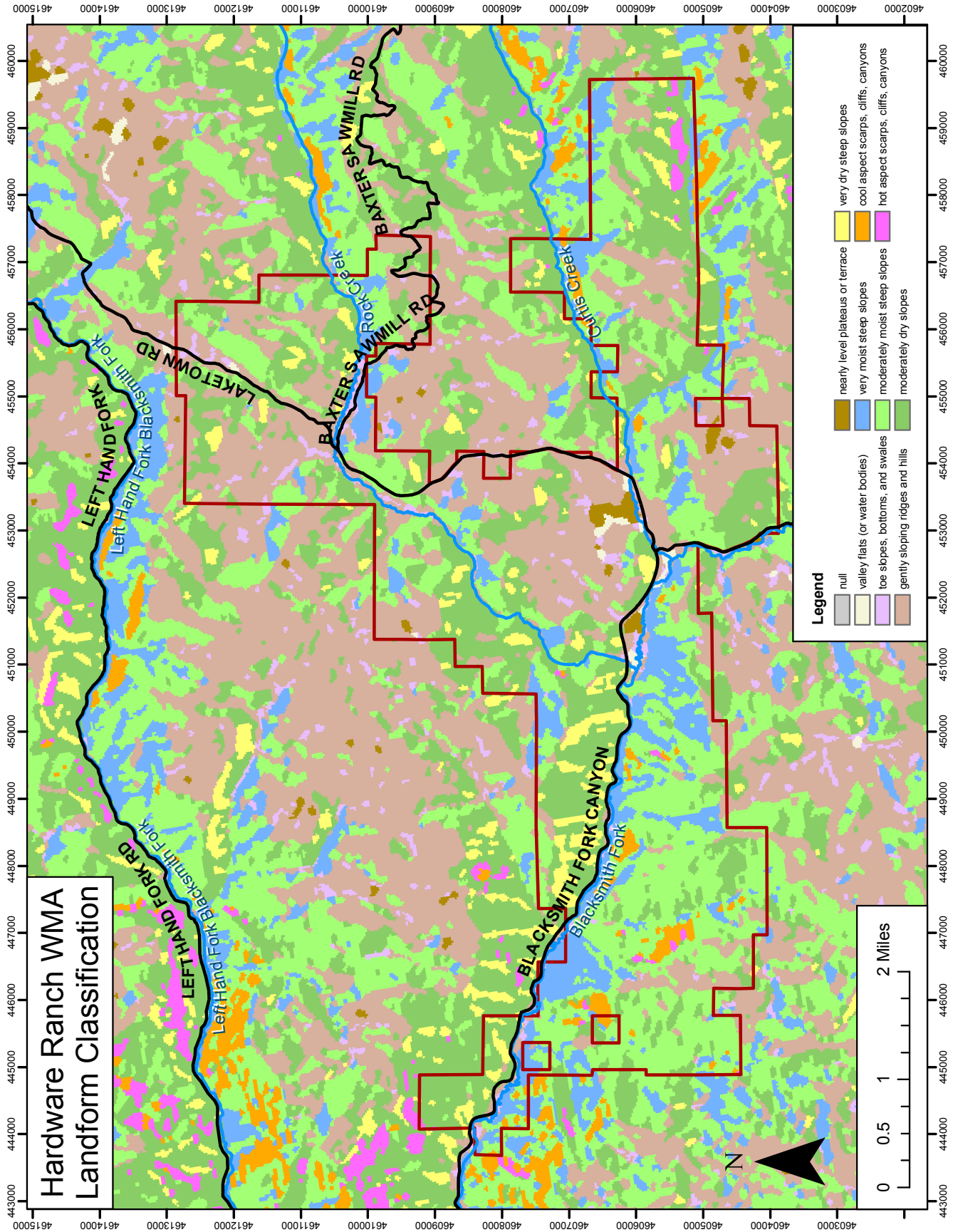


Appendix A – HRWMA Maps



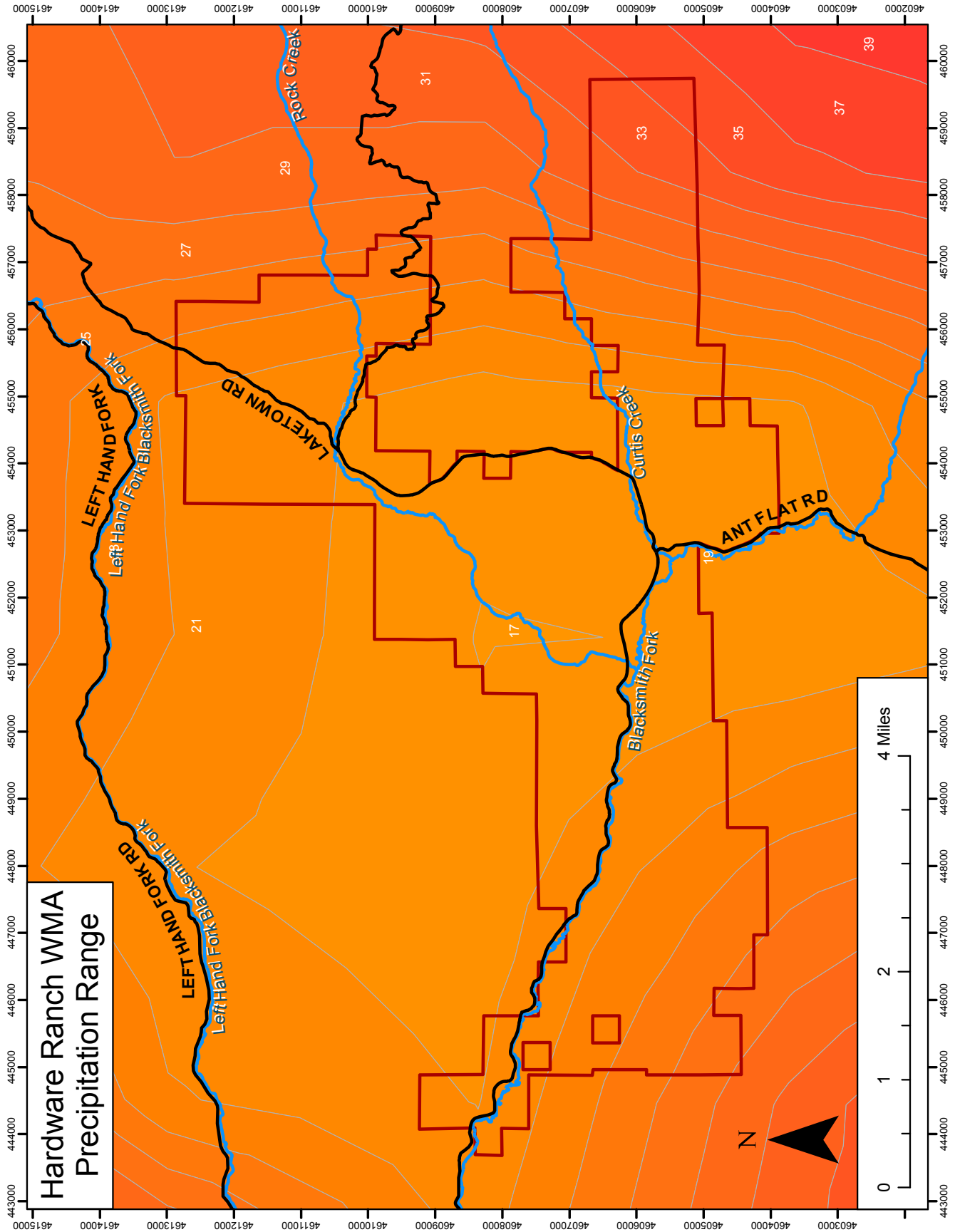


Hardware Ranch Wildlife Management Area Management Plan



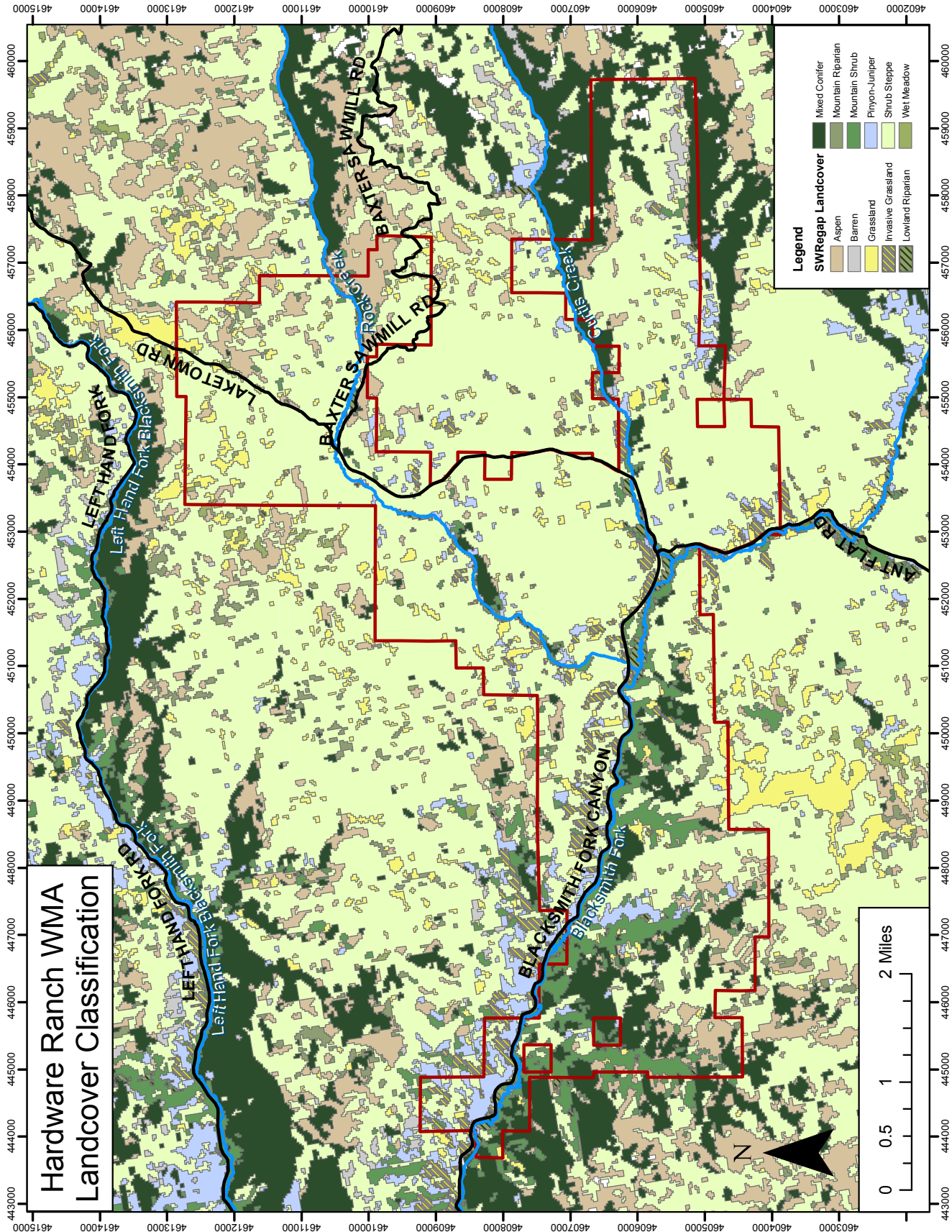


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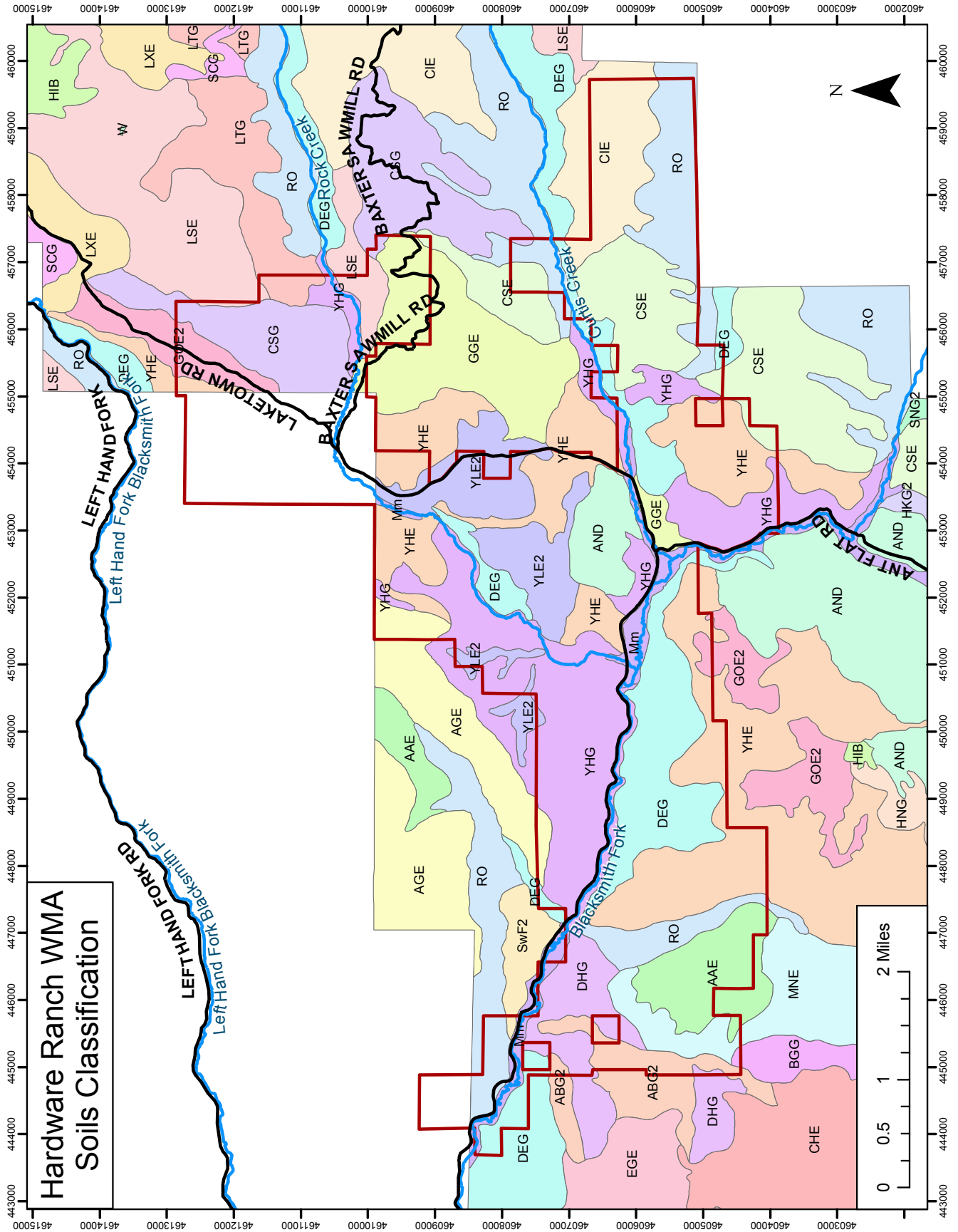


Hardware Ranch Wildlife Management Area Management Plan





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Appendix B – Planning Participants and Public Involvement

Introduction

The Utah Division of Wildlife Resources (Division) initiated the development of a Management Plan for the Hardware Ranch Wildlife Management Area (HRWMA) pursuant to Utah Code Section 23-21-2.1. The Management Plan will include a revised Mission Statement for the HRWMA, and goals and objectives for management in support of the new Mission Statement. Although public involvement in agency planning is not required by statute, the Division wishes to involve the public and stakeholders in the planning process to both educate the public and build support for the plan and for the management and programs of HRWMA.

The purposes of the Public Involvement Plan are to support development and implementation of the Management Plan by:

- » Identifying stakeholders and interested publics
- » Providing clear, easily understood, factual information about HRWMA, its resources and programs
- » Helping to identify ideas, issues and management opportunities
- » Creating opportunities to gain stakeholder and public input on the Plan
- » Building public and stakeholder support for the planning process and Management Plan

This Public Involvement Plan sets forth the methods by which the public has the opportunity to be informed and appropriately involved in the planning process. The public involvement process will focus on an interactive dialogue of information that will result in the dissemination of information relating to the mission and responsibilities of the Division and factual information about the resources and operations of the HRWMA. The timing, formats, and participation of stakeholders and the public in the planning process are described below.

Public Involvement Goals

The goals for public involvement in the HRWMA planning process are to:

- » Increase the understanding of stakeholders and the general public about the mission, resources, and operations of the HRWMA
- » Ensure coordination and communication among project participants, stakeholders and the general public
- » Send consistent and accurate messages
- » Solicit appropriate input on Management Plan goals and objectives
- » Build constituent support for implementation of the Management Plan

Project Schedule and Status

The Division began the Management Plan process in March, 2009. It is anticipated that the draft Management Plan will be reviewed by the Regional Advisory Council (RAC) and the Board of Wildlife Resources (Wildlife Board) before approval by the Division. Final Division approval is anticipated in spring, 2012.

Project Team

The Management Plan will be an internal administrative Division agency document that will guide management and decision-making at the HRWMA. As such, the bulk of the planning activity will be performed by Division staff and Logan Simpson Design, Inc. the planning consultant retained to assist in the Plan project. A core project team has been identified, consisting of Division employees from the areas of aquatic and terrestrial biology; law enforcement; public education and outreach; and management, to do the bulk of the information gathering and planning work. Division core project team members include Ron Hodson, Randy Wood, Scott Walker, Phil Douglass, Darren DeBloois, Marni Lee, Paul Burnett, and Dan Christensen

Plan Review and Adoption

While there are no legal requirements to incorporate public or stakeholder input into the decision-making process, it is the policy of the Division to consult with affected parties and the general public in agency policy decisions.



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To that end, public participation in the planning process will be invited at strategic points in the process to accomplish specific planning objectives as described below.

The reviews and recommendations of the RAC and the Wildlife Board will be conducted in open forums, and public and stakeholder attendees will be invited to comment on both the planning process and the draft Management Plan. Their recommendations will be forwarded to the Director of the Division for his consideration. The final decision on adopting the Management Plan will be made by the Director of the Division pursuant to State statutes and administrative agency rules.

Key Contacts

Dan Christensen is the Superintendent of the HRWMA and Project Manager for the Division. Contact Information: (435) 753-6168, danchristensen@utah.gov.

Jim Carter is the project manager for Logan Simpson Design, Inc. (801) 364-0525, jcarter@lsdut.com.

Public Involvement Activities

Public involvement was scheduled at strategic points in the Master Plan project. Several groups of public and stakeholders were identified, and roles and modes of participation were selected. Public involvement for the HRWMA Management Plan project included five types of activities:

- 1.) Technical Advisory Committee Meetings – In the past, HRWMA management has consulted with key technical experts on issues related to habitat management, grazing and other management matters. For the purposes of the Management Plan project, knowledgeable experts in the fields of aquatic and terrestrial biology, grazing, education, and legislative policy were asked to provide review and feedback on draft Plan goals, objectives and policies to assist the Division staff in developing a draft Management Plan. TAC members were also asked to communicate with their constituencies to encourage participation in the planning process and implementation of the Management Plan.
A TAC meeting was conducted on July 14, 2009, and the agenda included review of the revised HRWMA Mission Statement and the annotated outline of the Management Plan document. It is anticipated that the TAC will review the administrative draft Management Plan before it is forwarded for Division agency review. Depending on the public input received at the Open House described below, the TAC may be convened again to review comments and suggest revisions for further consideration in the review and approval process.
Members of the TAC include Curtis Webb (Utah Legislator), John White (Cache County Council Member), Josh Runhaar (Cache County Planner), Nancy Mesner (Associate Dean, Utah State University College of Natural Resources), Mike Laughter (Mule Deer Foundation), Richard Drolesbeke (Manager of Bear Lake State Park), and Fred Provenza (Utah State University Professor of Range Science)
- 2.) Project Web Page – Division staff created a web page linked to the Hardware Ranch website to post project status updates and solicit questions and comments. Comments and questions posted to the web page were forwarded to Logan Simpson Design for inclusion in the project record and for consideration in the planning process. The web page will also be used to announce the time and places of public meetings and RAC and Wildlife Board meetings. The web page will include an opportunity to sign-up for project-related e-mail news updates, including times and dates of public meetings, responses to project questions, and other information. Links to the project web page will be placed on other appropriate web sites.
- 3.) Media Notification – At strategic points in the planning process, press releases were prepared for distribution to the news media. The Division maintained fact sheets, frequently asked questions and other project briefing materials. The Division will also seek opportunities for media coverage and broadcasts about HRWMA and the Management Planning process as the adoption process begins.
- 4.) Public Open House(s) – When the project team has developed a draft Management Plan document ready for public review, a public open house will be scheduled to introduce the draft Management Plan, describe the planning process, and solicit public input on the Plan. The open house will be scheduled following comment on the agency administrative draft. The comments and suggestions gathered at the open house will be reviewed by the core planning team and considered for inclusion in the Management Plan.



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- 5.) RAC and Board of Wildlife Resources meetings – When the project team has reviewed public input, and has developed a draft Management Plan for consideration for adoption, the Division will place the draft Management Plan on the agenda of the Northern Region RAC for discussion, public input and recommendation to the Wildlife Board. Following RAC review, the draft Management Plan will be forwarded to the Wildlife Board for hearing and recommendation to UDWR. Both the RAC and Wildlife Board meetings will be scheduled and publicly noticed on the project Web Page.

Key Messages and Talking Points

- 1.) Key Message – Management of HRWMA will be based on the adopted Mission Statement and Management Plan goals, objectives and policies.
- » Talking Points
 - » HRWMA is a wildlife management area that allows for recreational activities that are consistent with its wildlife management objectives.
 - » Habitat improvement and public outreach have always been important components of the HRWMA mission.
 - » Wildlife and habitat management at HRWMA is guided by larger Wildlife Management Unit objectives and the Utah Comprehensive Wildlife Conservation Strategy.
 - » Activities allowed on Division-owned lands are governed by Utah Administrative Rule R657-28.
- 2.) Key Message – Outreach is a key component of operations at HRWMA
- Talking Points
- » HRWMA is the only Division management unit in the Conservation Outreach section of the Division
 - » HRWMA sponsors a number of educational and volunteer programs in addition to the winter Elk feeding program
 - » HRWMA undertakes partnerships with conservation groups and outdoor recreational organizations to support habitat improvement.
 - » HRWMA undertakes partnerships with educational organizations
- 3.) Key Message – Cumulative uses on HRWMA have resulted in use conflicts and unacceptable resource impacts that the Management Plan will seek to resolve.
- Talking Points
- » HRWMA sees more than 70,000 visitors each year
 - » Uses at HRWMA include hunting, fishing, camping, OHVs, wildlife watching, and grazing, in addition to the Elk feeding and wildlife/habitat management activities.
 - » Increasing motorized recreational use is creating adverse impacts on wildlife habitat in some areas of HRWMA
1. Key Message – HRWMA needs to continue to seek support beyond base annual funding.
- Talking Points
- » Many programs at HRWMA depend on funding from partners, which varies from year to year.
 - » Unanticipated contingencies frequently demand reallocation of scarce resources.

Summary Of Comments From The HRWMA Web Page

Between July, 2009 and May, 2010, twenty-three comments were posted on the Division's website comment page for the Hardware Ranch WMA Management Plan project. A number of comments posted during the late summer of 2009 expressed opposition to the enclosure fencing of Rock Creek to limit motorized vehicles in the riparian areas next to the Creek. Several commented that grazing should not be allowed if vehicular camping was going to be excluded from the area. Several other comments expressed support for the enclosure project, saying that it was sad to see the damage that had been done in the area, and expressing their support for restoring riparian areas at Hardware Ranch WMA. Several comments suggested that improved campsites be provided in alternate locations when long-time campsites are closed.

Several comments expressed the concern that there appears to be little policing of recreational activities at Hardware Ranch WMA. Those commenters expressed concern that it appears that campers are allowed to set up



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trailers and other camps that remain in place “all season long”, depriving other users of camping opportunities. One comment expressed concern with law enforcement and safety. One comment suggested that entrance to HRWMA be regulated at a gate, and that visitors be told what the rules and expectations are on entrance to the WMA.

Several comments also expressed concern with grazing at Hardware Ranch WMA, saying that they felt that grazing was not an appropriate use in a Wildlife Management Area.

[Visit us](#) [Hours & activities](#) [About us](#) [History](#) [Opportunities](#) [Education](#) [Contact](#)

Hardware Ranch

WILDLIFE MANAGEMENT AREA



Hardware Ranch is closed for the season.



Hardware Ranch Management Plan

Read the draft version of the new plan, then provide us with any comments that you might have.

HARDWARE RANCH IS LOCATED ON HIGHWAY 101, FIFTEEN MILES EAST OF HYRUM, UTAH.

Utah Division of Wildlife Resources



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Utah Division of
WILDLIFE RESOURCES

The Future of Hardware Ranch

Public invited to review and comment on management plan

In 1945, the State of Utah purchased Hardware Ranch and turned it into a Wildlife Management Area (WMA). Today, the Utah Division of Wildlife Resources (DWR) oversees the 14,000-acre ranch, which provides critical big game winter range for deer, moose and elk. Other areas of focus include habitat restoration, wildlife research and public outreach.

Because the ranch is an important part of the Cache Valley community and draws visitors from across the state, the DWR is seeking public comment on the management issues that face this popular area.

What management issues does Hardware Ranch face?

The DWR has drafted a management plan to identify the mission of Hardware Ranch and to outline the public activities compatible with that mission. The working draft of the plan addresses the following multiple-use issues and activities:

- OHV use and misuse
- Formal elk feeding
- Winter tourism
- Dispersed camping and access management
- Hunting, fishing and wildlife watching
- Education and outreach programs
- Habitat restoration
- Prescriptive grazing practices
- Local history and folklore



Family outings — including fishing trips — are a big part of traditional activities at Hardware Ranch. Unfortunately, some areas have been damaged and need to be restored.



Hardware Ranch provides great access to prime hunting areas.



Appendix C – Grazing

History

Grazing has been a part of Hardware Ranch since the earliest pioneers began to run livestock east out of Cache Valley up Blacksmith Fork Canyon around 1858. Ranches and farms followed timber and mining operations well beyond where Levi Curtis homesteaded much of what is now Hardware Ranch Wildlife Management Area in 1868. Records indicate that big game was plentiful and by the early 1900s there were increasing conflicts between farmers trying to graze public land and store hay, and deer and elk looking for food in the winter. By the late 1903s the Utah Department of Fish and Game (UDFG) began exploring ways to mitigate the winter crop depredation in the valley; and to balance the habitat needs of wildlife against ever increasing livestock grazing along the foothills and other important wildlife habitat.

In 1940 UDFG submitted a proposal to the US Fish and Wildlife Service (USFWS) for a grant under the Federal Aid in Wildlife Restoration Act of 1937. They proposed purchasing a few thousand acres located on the benches between the mouth of Blacksmith Fork Canyon and Providence Canyon. The ground would essentially allow them to increase big game numbers “without damaging results to the range.” This additional public ground could also help reduce winter crop depredation by elk and deer in the valley.

By 1943, UDFG submitted another proposal to the USFWS requesting funds to purchase an additional 6,000 acres of ground from Ernst Peterson and Sons for essentially the same reasons as the Millville purchase. This land was located approximately 15 miles east of the Town of Hyrum, in the heart of Blacksmith Fork Canyon and was already known as Hardware Ranch or “the Hardware.”

HRWMA opened to the public under State ownership in the winter of 1945-46. Initially there was no attempt to feed large numbers elk and deer, but as public attraction to the ranch grew, so did a formal winter feeding program.

In the spring, attention turned to spreading livestock grazing over the new public land in order to improve range grasses that would also benefit wildlife. Both sheep and cattle have grazed on HRWMA since then in exchange for in-kind assessment work to maintain and improve fences and other infrastructure.

Current Grazing Management

Range conditions and management objectives have changed over the 60-plus years that Hardware Ranch has operated as a wildlife management area. Recent decades of prolonged drought, an explosion of noxious and invasive weeds, human encroachment on critical wildlife ranges and habitats, and dramatic shifts in big game populations have all contributed to the need to rehabilitate and protect critical habitat.

Utah Division of Wildlife Resources Administrative Rule 657-28 describes the uses and activities allowed on Division Lands. It provides for prescribed domestic livestock grazing “necessary for the maintenance or improvement of wildlife habitat on particular division properties.” Grazing is utilized at HRWMA as a habitat management tool in accordance with Rule 657-28. Grazing objectives are summarized in tables below.

Through other land acquisitions, HRWMA has grown to approximately 14,258 acres and about 65% is appropriate for some type of domestic livestock grazing. Implementing prescriptive grazing on the remaining 35% of the land is difficult do to very steep slopes and rocky, thin soils which do not respond well to disturbance. Because of these constraints, prescriptive grazing is to be focused on the lands that can be effectively grazed.

Domestic livestock grazing always affects rangelands, and if properly monitored and controlled, grazing can alter areas inaccessible to equipment for treatment. Traditional grazing practices did not meet the habitat goals for HRWMA, so alternatives were considered.

Following a unique 3-year grazing study on HRWMA (2004-2007) prescriptive grazing was adopted as a habitat management tool on the facility. The grazing program uses sheep and/or cattle to influence specific plant community compositions. One of the primary objectives at HRWMA is to increase rangeland forb production to benefit transitional and summer big game areas, as well as nesting and brood-rearing sage grouse.

Other habitat improvement objectives for which grazing can be an effective tool include:



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- » Increasing and maintaining brush production of wintering big game,
- » Maintaining and enhancing riparian areas as highly productive aquatic and terrestrial environments,
- » Reducing undesirable vegetative species such as dyers woad, sotted knapweed, and cheatgrass,
- » Providing meaningful recreational and educational opportunities to increase public awareness and stewardship of wildlife and habitat, and
- » Reduction of fine fuels that can trigger catastrophic wildfire.

The 2004 to 2007 grazing study and current management has delineated areas of HRWMA into well-defined grazing management areas. The prescriptive method establishes specific objectives for each management area, and controls:

- 1.) Location – the placement of livestock within a controlled management area,
- 2.) Density – the number of grazing livestock allowed in the management area,
- 3.) Season – the time of year livestock is introduced or reintroduced, and
- 4.) Intensity & duration – the length of stay within a management area based on grazing effects on vegetation.

Tailoring these variables to obtain the specific objectives is the ‘prescription’ for each management area.

Grazing is an effective tool that will be used to improve critical areas and ranges and thereby contribute to the overall health and diversity of habitats on HRWMA. The management units may be separated but they are not fragmented because the characteristics extend into the surrounding environment.

Prescriptive grazing differs from most traditional programs in many ways. On HRWMA large concentrations of sheep (1,500 head) or cattle (750 head) are loaded onto ranges in the midst of spring green when grass as well as undesirable plants are emergent, succulent, nutritious, and palatable to livestock. This is also a good time to generate the plant disturbance necessary to invigorate decadent brush and to use muddy hoof prints to open a seed bed. Some of the management areas may open to grazing as early as the first week in April.

Prescriptive grazing also requires significant evaluation prior to turnout of the animals in order to establish a baseline of existing vegetative conditions as well as objectives, and targets and timelines for livestock rotations into each management unit. On the WMA several of the areas benefit from being re-grazed in the same season. The advantages to re-grazing include adding feed, Animal Unit Months (AUMs) to the range. Re-grazing some areas is possible because the same plants are again nutritious and palatable, re-grazing damages undesirable plants at a later stage in their growth and, often, hoofs push seeds into the moist soil. A grazing season on HRWMA could run from April 1 through the end of August, or around 5 months. Based on data from the grazing study, there are typically about 3,000 (traditional) AUMs available, depending on moisture, temperature and other seasonal variables. As with other grazing, the problem is balancing a challenging abundance of feed in the early spring with rapidly drying grass in July and August.

The fences and other infrastructure on HRWMA have improved dramatically over the last few years, although much of it is along exterior boundary lines, and doesn’t coincide with the boundaries of designated grazing management areas. This is one of the reasons that prescriptive grazing is much more resource and labor intensive. Livestock must be controlled and rotated as determined by the pre-season assessment, and then by in-progress evaluations. Habitat factors like sage grouse nesting activities, fish spawning seasons, and runoff can be forecasted, but are often adjusted; thus both livestock and range conditions require very close monitoring.

Grazing on HRWMA is conducted in the midst of many other activities, and HRWMA is open to the public 365 days a year. Several programs run April through December and the WMA is a popular location for hunting, fishing, hiking, horseback riding, OHVs, and camping. Public access is important and temporary closures to accommodate grazing are rare.

Hardware Ranch WMA has formed a Grazing Advisory Board comprised of local grazers, senior faculty from Utah State University, livestock and range managers, and UDWR biologists. This group has reviewed and recommended changes and additions to the program at HRWMA, and provided input to this new Management Plan. Recommendations from the board will continue to be important as other methods of habitat improvement such as controlled burning, herbicides, and mechanical disturbance are considered.

Contracting for grazing for the Division is accomplished through the Division of Purchasing. Contract monitoring

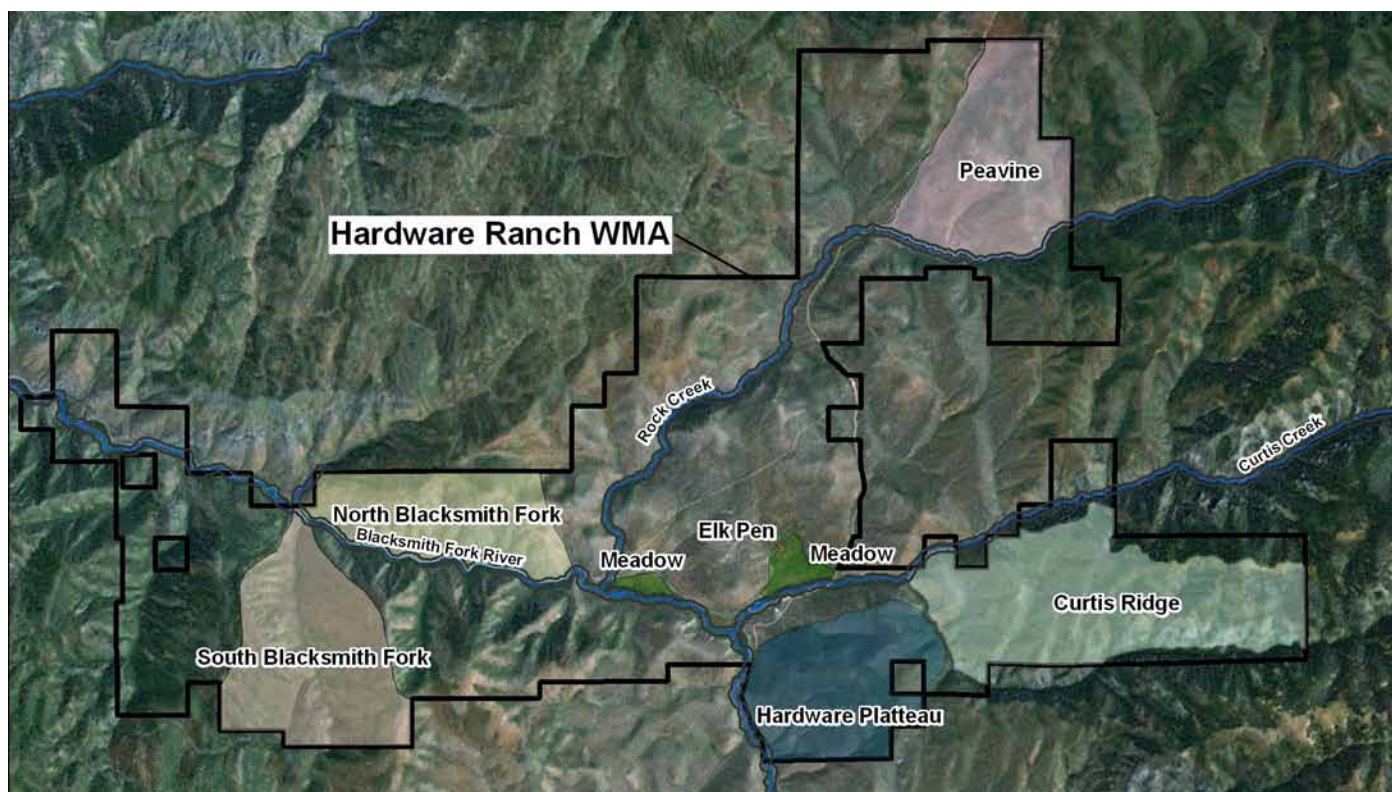


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and onsite management is conducted by the region and the facility managers. Grazing fees are based on the Division-wide average cost of AUMs. That cost in FY2010 was \$10.49 per unit and approximately 1,600 AUMs were grazed on HRWMA in FY 2010. Payment is either in cash or in-kind assessment, where materials and labor equal to the grazing fees are provided on-site by the grazer. Since grazing is a tool for improving habitat, all grazing fees are targeted at projects that benefit wildlife and their ranges. Projects on HRWMA have included fencing to control livestock and protect sensitive resources, development of dispersed water sites, weed control activities, and cleanup of abandoned fences and sites.

HRWMA has obtained other project funding used to complement grazing fees. Recently, other funds were used to construct an enclosure fence on a section of Rock Creek being impacted by both livestock and vehicles. Grazing fees had already been used to fence adjacent ground, and together the two fence systems provide control and protection for the area, as well as a new management tool for other resources and programs.

Management zones have been re-designated and realigned for this Management Plan. Resource considerations extend beyond grazing and include monitoring and evaluation of all activities and programs that affect habitat on HRWMA. The map below shows the currently-designated management areas at HRWMA.



Grazing Prescriptions by Grazing Management Area - August 2010

Unit Name: Curtis Plateau

Unit Goal for Wildlife: Big game summer and transition range/ Protection of Curtis Creek/Increase forb understory/ Maintenance of species diversity

Acreage: 2,900

Water Resources: 2 developed springs & ponds

Infrastructure: Fence along Hunsaker Ranch on north side of Curtis Creek

AUMs/Capacity: Summer-200, fall- 100

Target/Timing: Mature, same age class sage brush

Grazing Strategy: Sheep June thru mid-July and October

Notes: Controlled burn scheduled for September 2010



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Unit Name: Hardware Plateau

Unit Goal for Wildlife: Improving big game winter range / Sage grouse leking ,nesting, brooding and rearing/ Reduction of fine fuels/ Increase brush and forb production

Acreage: 1,400

Water Resources: Elbow springs, Trough springs, Pond on east side of unit

Infrastructure: Wire fence along south & portion of east boundary

AUMs/Capacity: 200 AUMs

Target/Timing: Grass mid-May thru June

Grazing Strategy: Sheep to feed on steep slopes

Notes: Sage grouse leking and rearing until mid-June

Unit Name: Rattlesnake/North Meadow Basin

Unit Goal for Wildlife: Wintering elk/Reduction of noxious weeds

Acreage: 1,700

Water Resources: Irrigation canal & system/3 ponds

Infrastructure: Fence along SR101/Fence along Cache County Road

AUMs/Capacity: 300 AUMs

Target/Timing: Grass & Noxious weeds May thru July/December thru February wintering elk

Grazing Strategy: Sheep or cattle

Notes: 40- acre private property on east edge

Unit Name: Squaw Flats/ Peavine

Unit Goal for Wildlife: Protection of Rock Creek/ Reduction of noxious weeds/ Increasing forb understory

Acreage: 2,800

Water Resources: Rock Creek/ Ponds on Squaw Flats

Infrastructure: Exclosure fence along Rock Creek/Fence along west & portion of north boundaries, Cache County Road

AUMs/Capacity: 400 AUMs June thru July

Target/Timing: Grass June thru July

Grazing Strategy: Sheep or cattle

Notes: Lack of water away from Curtis Creek and the ponds on Squaw Flats limits this area

Unit Name: South Blacksmith Fork

Unit Goal for Wildlife: Protection of Blacksmith Fork River / Manitenanceof existing species/ Occassional disturbance to improve forage quality

Acreage: 2,,900

Water Resources: Blacksmith Fork River

Infrastructure: SR 101

AUMs/Capacity: unknown

Target/Timing: June thru JAugust

Grazing Strategy: Sheep or cattle

Notes: This is a large area but requires special conditions to open and develop due to steep compartments and proximity to both the river an SR 101.

Unit Name: Rock Creek

Unit Goal for Wildlife: Improve big game transition range / Protection of Rock Creek/Reduction of noxious weeds/ Increasing forbs and brush

Acreage: 900

Water Resources: 2.1 miles of Rock Creek/ Pond in Pole Hollow

Infrastructure: Boundary cattle fence along west side/Rail exclosure fence along Rock Creek/ drift fence along Pole Hollow Road/ USFS Road along north end of Pole Hollow / Water access point in exclosure fence

AUMs/Capacity: 150 AUMs

Target/Timing: Grass and weeds in June

Grazing Strategy: Sheep or cattle

Notes: South water point needs to be hardened



Appendix D – Communications Plan

“Reconnecting people to nature is critical and we envision an engaged and informed public who see Hardware Ranch WMA as a good neighbor, and a valuable place to appreciate and sustain wildlife and the places they live.”

Introduction

The overall purpose of this Communications Plan is to improve and maintain the effective exchange of information between Hardware Ranch Wildlife Management Area (HRWMA) and its various publics. Effective communication facilitates recognition that wildlife is valuable to Utahns and strengthens their commitment to stewardship of natural resources. Normal management activities include notification and discussion of programs and major projects; and informational signs on the WMA help inform the public before and during changes. Outreach is one of the primary venues for talking with and listening to our constituents- and it is proactive.

HRWMA is recognized as a significant contributor to both heritage and the current economic profile of Cache Valley. The winter outreach program remains one of a few reliable winter programs in far northern Utah; and innovative education programs support some key state education goals while fostering a broad coalition of like-minded partners. This is especially critical in light of HRWMA’s visibility, public use, facilities and infrastructure, and finite resources to meet increasing demands.

Three major objectives of effective outreach and communication are:

- 1.) To increase public awareness and stewardship of the State’s wildlife resources
- 2.) To increase public and stakeholder understanding and support of Division and HRWMA management objectives
- 3.) To solicit ideas and suggestions for improving HRWMA operations.

Key Themes and Messages

Outreach efforts at HRWMA can support habitat and wildlife conservation through public support, while promoting wildlife-based tourism and adding diversity to the local economy. Recruiting and retaining hunters and fishers, and offering watchable wildlife opportunities accomplish all of these objectives within the context of an active conservation education strategy.

It is important to a coordinated outreach plan that key HRWMA messages are identified and consistently communicated. Key themes and messages at HRWMA include:

- » HRWMA is managed in accordance with a formal Management Plan
- » HRWMA is managed by the Utah Division of Wildlife Resources
- » Wildlife and habitat on HRWMA are managed on a WMU scale
- » Habitat is managed for ecosystem health
- » Winter elk feeding is conducted to reduce crop damage in the valley
- » Grazing is used as a habitat improvement tool
- » Winter and transitional range on HRWMA is extremely important to mule deer and other wildlife that rely on sagebrush and other browse.
- » HRWMA is adjacent to both private and public lands and provides vital corridors
- » Hunting and fishing license fees support Division programs, including HRWMA
- » Hunting & fishing on HRWMA is open to the public via over-the-counter licenses; and hunting and fishing opportunities on the WMA are abundant.
- » Fenced exclosures are used to protect or to “rest” heavily used areas, and allow them to recover from impacts
- » Public access to HRWMA is generally open except for restrictions to protect wildlife, habitat and public safety
- » OHV on the WMA is restricted to designated roads and trails



Public and Stakeholder Understanding and Support

HRWMA stakeholders and the general public have developed a number of expectations about HRWMA and the management and activities that take place there. As an actively managed wildlife management area, programs and management activities will change from season to season and from year to year. These changes may raise concerns among stakeholders and the general public that their use and enjoyment of HRWMA may be limited or curtailed. This plan suggests criteria to select the best tools to identify affected stakeholders, messages, and communications techniques best suited to communicate the Division's objectives for management initiatives, and the benefits of those initiatives.

HRWMA stakeholders are varied in their relationships to HRWMA, their values and their expectations. By stakeholder group, anticipated stakeholder interests and expectations may include:

- » General Public – Access to and continuation of the elk feeding program. Continuing education programs for school-age children. Opportunities for casual visitation, driving tours, wildlife viewing, picnicking, walking. Information on wildlife. Adequate sanitary facilities.
- » Hunters and fishers – Access to high-quality hunting and fishing areas. Parking for vehicles and trailers to support hunting. Opportunities for overnight camping to support hunting and fishing activities.
- » Recreationists – Access for horseback riding, OHV and snowmobile use. Continued year-around access to the Shoshone Trailhead and adequate parking. Vehicle-based and non-vehicular camping opportunities. Mountain biking access.
- » Grazers – Continued access to HRWMA for financially viable livestock grazing.
- » Volunteers – Continued opportunities for dedicated hunter and other volunteer work at HRWMA.
- » Community Leaders – Operation of HRWMA in a manner that supports local economies. Maintenance of traditional HRWMA uses.
- » Academia – Continued opportunities for research at HRWMA.
- » Environmental Community – Management at HRWMA to protect ecosystem health and sensitive species. Protection of surface water quality.
- » Educators – HRWMA participation in quality education programs.
- » Partners – A predictable return on investing with HRWMA

In addition to differing values and issues, HRWMA stakeholder groups have differing ways of communicating and getting information. Communication methods should be selected based on both the purposes of the communication and the intended audiences.

Management Initiatives and Structuring Messages

Many stakeholder expectations are based on the assumption of continuation of existing management practices, while some stakeholder expectations anticipate or advocate changes in management approaches and methods. Some of the management changes suggested by the public input received during preparation of the HRWMA Management Plan include:

- » Limiting the time a camper may occupy a camping site at HRWMA
- » Reducing grazing at HRWMA
- » Suggested areas for dispersed water development
- » Increasing signs and other sources of information immediately available to the public

Changes in existing management are likely to concern stakeholders and the public. For each new management initiative or change in management strategy at HRWMA, it is important to systematically evaluate a number of factors that will guide the development of the communication and selection of the means of communication. Those include:

- 1.) What is the nature of the management initiative or change?
- 2.) How does it relate to the HRWMA mission, goals and objectives? I.e., what goals and objectives are advanced by the change or initiative?
- 3.) Which stakeholder groups will be interested/affected? Which may feel benefitted? Which may feel adversely affected? Why?



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- 4.) What is the purpose of the communication to each stakeholder group? To invite comment? To educate or explain? To invite participation? To encourage support?
- 5.) What message content is best suited for the purpose of the communication?
- 6.) What method(s) of communication are likely to be most effective in accomplishing the purposes of the communication?
- 7.) In what order (if any) should stakeholders be contacted?

The Rock Creek enclosure decision in 2009 is an example of a management initiative that lends itself to evaluation as an example of the above-described approach.

- 1.) What is the management initiative? – To build enclosure fencing around riparian areas along Rock Creek.
- 2.) How does it advance the HRWMA mission, goals, and objectives? It advances Wildlife Habitat and Management Goal 2 - Identify, protect and improve riparian habitat; and Goal 3 – Realign recreational usage to reduce negative effects on wildlife habitat.
- 3.) Which stakeholder groups will be interested/affected? Visitors who have traditionally camped in the riparian areas of Rock Creek are likely to be unhappy that their traditional camping areas are not available to them. Anglers are likely to be supportive if they feel it will enhance fishing opportunities. The environmental community is likely to be supportive if they believe it will enhance habitat and water quality. Local officials may be concerned if they believe that the change will adversely affect traditional uses.
- 4.) What is the purpose of communication with each stakeholder group?
 - » Traditional campers – to assure them that vehicle camping is still allowed at HRWMA, and that there are alternative sites available to them.
 - » Anglers – to assure them that the exclosed areas will remain open to pedestrian traffic and fishing access, and that the enclosure is expected to improve water quality and aquatic habitat.
 - » The environmental community - to assure them that the Division is actively managing the State's wildlife and HRWMA resources to improve riparian and aquatic habitat.
 - » Local officials – to assure them that vehicle and non-vehicular camping is still allowed at HRWMA.
- 5.) What message content is best suited for the purpose of the communication?
 - » Traditional campers – Explanation that wheeled vehicles are the cause of the impacts and identification of alternative vehicle camping opportunities.
 - » Anglers and the environmental community – Information about how healthy riparian areas improve water quality and aquatic habitat. For anglers and non-vehicular campers, photos or graphics showing the kinds of access still available.
 - » Local Officials – Identify both vehicular and non-vehicular camping opportunities that remain at HRWMA.
- 6.) What method(s) of communication are likely to be most effective in accomplishing the purposes of the communication?
 - » Information about riparian areas and water quality – Signs explaining the purposes and intended outcomes of the enclosure should be posted at the site and a page on the Division's website linked to the HRWMA page explaining the purposes of the enclosure, connection to the Management Plan goals and objectives.
 - » Camping information – Sign at the site and information on the HRWMA web page identifying alternative vehicle camping areas and informing that non-vehicular access to the exclosed area is still available.
 - » Local officials – personal calls explain the purpose of the enclosure and HRWMA management goals; alternative camping opportunities; and asking if they would like a personal briefing.
- 7.) In what order (if any) should stakeholders be contacted? For the enclosure project, initial contact with local officials should precede a more general announcement of the project. Information about the enclosure should be posted at the site and on the web page several months in advance of the project in order to educate the public about the objectives and need for the project. Members of the environmental and fishing communities should also be made aware of the project in advance in order to encourage their support.



Communications Strategies

HRWMA messages can be disseminated in a variety of ways, both on-site at HRWMA and off-site. Among the communications strategies identified for HRWMA are:

Communication venues that have proven effective for HRWMA messages include:

- » Provide adequate on-site information to HRWMA visitors
- » Foster an active program where communication is truly 2-way
- » Announce changes well ahead of making changes
- » Focus on dialog with stakeholders critical to long-term success support of HRWMA.
- » Create public commitment to enjoy and preserve HRWMA.
- » Target communications activities to key audiences
- » Create community-based programs
- » Partner to achieve common goals (coalitions)
- » Keep information current and available
- » Create 'internal partnerships' to support outreach as it supports their projects
- » Link outreach to 'action' plans

Communication venues that have proven effective for HRWMA messages include:

- » Visitor's Center displays
- » HRWMA interpretive sites
- » Volunteer program
- » Partners/coalitions
- » Events
- » Educator Training
- » School programs
- » Internet information
- » Signs and maps
- » Heritage activities

Operational components and activities that support effective outreach at HRWMA include:

- » Proactively introducing management changes that will affect visitor experience;
- » Developing signs, maps and other media to inform visitors;
- » Defining and focusing education and information capabilities and efforts;
- » Defining outreach capabilities;
- » Prioritizing outreach activities;
- » Pursuing external funding and promoting partnerships; and
- » Sustaining outreach activities at a programmatic level.

Several communications and outreach needs have been identified at HRWMA, including:

- » Quantify Outreach assets/resources
- » Prioritize outreach programs/projects
- » Resource commitment from other Division sections
- » External funding
- » Partners
- » Programmatic commitment

Communications Project Template

In order to organize the effort and resources needed for a communications project for a management initiative or educational program, it may be helpful to consider each of the following aspects of the project:

Project name
Project manager
Outreach manager
Spokesperson
Issues:



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- What is the action?
- Why is it needed?
- Who will it impact?
- How will it affect HRWMA?
- Potential impact of not doing outreach?

Target audiences:

- Who needs to know?
- Who is most impacted/ benefitted? (stakeholders)
- Who can influence the process and/or outcome?

Message:

- What is the message?
- Keep message focused & consistent

Outcomes:

- What is the specific desired outcome?
- What are other potential outcomes?

Message delivery:

- Methods of communicating & specific activities?
- Evaluating and response to feedback?
- Where is more information available?

Resources available:

- Budget
- Personnel

Timeline/deadlines:

- When does project begin and end?
- When does outreach begin and end?
- Specific milestones (activities or objectives)

Follow up:

- In-progress photos & other media materials
- Summary statement (What happened?)
- Who needs to know?



Appendix E – Resources and Information

Division of Wildlife Resources information

About Utah Division of Wildlife Resources - wildlife.utah.gov/dwr/about-us.html

Utah Wildlife and Habitat Partners and Projects - wildlife.utah.gov/watersheds

Utah Conservation Data Center - dwrcdc.nr.utah.gov/ucdc

Hardware Ranch Wildlife Management Area website – www.Hardwareranch.com

Utah Wildlife News - wildlife.utah.gov/dwr/news.html

Rules and Regulations Guidebooks - wildlife.utah.gov/dwr/hunting/guidebooks.html

Dedicated Hunter Program - wildlife.utah.gov/dwr/hunting/ded-hunters.html

UDWR Education Resources - wildlife.utah.gov/education/index.php

Utah Watchable Wildlife - wildlife.utah.gov/watchable-wildlife

Utah Comprehensive Wildlife Conservation Strategy - wildlife.utah.gov/cwcs/10-01-21-utah-cwcs-strategy.pdf

Mule Deer Management Plan - wildlife.utah.gov/hunting/biggame/pdf/mule_deer_plan.pdf

Predator Management Plan - wildlife.utah.gov/public_meetings/powerpoint/predator_management.ppt

Beaver Management Plan - wildlife.utah.gov/furbearer/pdf/beaver_plan_2010-2020.pdf

Moose Management Plan - wildlife.utah.gov/hunting/biggame/pdf/moose_plan.pdf

Utah Watershed Restoration Initiative - wildlife.utah.gov/watersheds/

Elk Management Plan - wildlife.utah.gov/hunting/biggame/pdf/elk_plan.pdf

Bonneville cutthroat trout Conservation Agreement

Boreal Toad Conservation plan

Sage Grouse Conservation Agreement.

Fire Management - <http://www.ffsl.utah.gov/firemgt/2010WardensManual4wcover.pdf>

AGRC – Utah Maps and geographic database - Mapserv.utah.gov/SGID

Other Documents and Information

Internal Audit Review - 1998 Review and recommendations for gift and interpretive sales at Hardware Ranch

Past Planning efforts - 1991-1996 A compilation of various committee reviews of Hardware Ranch with emphasis on outreach programming

Facility Evaluation - 1999 James R. Childs Associates review of Hardware Ranch facilities.

Operations Manual - Internally generated listings of standard operating procedures.

Wetland Ecosystem Education Plan - Listing of education opportunities and needs that exist within the drainages of the Great Salt Lake Ecosystem.

Utah Sensitive Species List

<http://dwrcdc.nr.utah.gov/ucdc/viewreports/sslist.htm>

Old Ephraim

<http://www.gleed.net/oldephraim/researchpaper.htm>

Wildlife Species Fact Sheets

<http://wildlife.utah.gov/publications/notebook.php>

Restoration of Riparian Habitats

<http://wildlife.utah.gov/pdf/riparian.pdf>

Utah's Threatened and Endangered Species

<http://www.berrymaninstitute.org/pdf/endgspec.pdf>

Hardware Ranch Timeline

<http://wildlife.utah.gov/hardwareranch/history.php>



Appendix F – Outreach Plan Outline

CHAPTER 1: OVERVIEW

PART 1 – OVERVIEW

- Purpose of HRWMA
- Purpose and Need of Planning
- Scope of PA&S Planning
- Planning Process
- Relationship to Five Year master Plan
- Interrelationships of chapters and how they work together to achieve overall goal of PSA
- Definitions (or in an Appendix)

PART 2 - AGENCY GOALS AND OBJECTIVES

- Related Agency Goals and Objectives
- Hardware Ranch WMA Public Awareness and Stewardship Goals and Objectives

PART 3 - VISITOR USE & IMPLICATIONS

- National & Regional Travel Trends
- Utah Travel Trends
- Local Cache Valley Travel Trends
- WMA Visitor Assumptions
- Hunting & Fishing
- Recreation
- Existing visitor use studies and data
- Implications for PA&S

PART 4 - WMA INTRINSIC QUALITIES

- Recreational
- Scenic
- Natural
- Historical
- Cultural
- Archaeological

PART 5 – SITE AND PROGRAM INVENTORY

- Site Inventory
 - Interpretive Spaces*
 - Education Spaces
 - Recreational Corridors
 - Hunting and Fishing Areas
 - Image: Location Map
- Program Inventory
 - Interpretive Programs*
 - Interpretive Sites
 - Interpretive Displays
 - Interpretive Media
 - Personal/Guided Interpretation
 - Partners
 - Budget
 - Education Programs
 - School programs
 - Community Programs
 - Events
 - Partners
 - Budget



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Volunteer Programs

Other

Visitor Services

PART 6 – IDENTIFICATION OF APPROPRIATE PARTNERS

Existing partner inventory

Guidelines for evaluating existing partners and continuing or discontinuing partnership

Guidelines for selecting future partners

PART 7 – IMPLEMENTATION

Criteria for prioritizing PS& A projects

Guidelines for creating new PS & A projects/programs

Monitoring and Evaluation criteria

Who Does What/ Supervision Structure

Implementation Schedule, Personnel and Budgets – No restrictions

Implementation Schedule, Personnel and Budgets –Phase in options

CHAPTER 2 – INTERPRETIVE PLAN

PART 1 – PURPOSE AND NEED

What is Interpretation?

What is the purpose of interpretation on the WMA and connection to other programs?

Thematic Connections to Conservation Education

PART 2 - VISITOR USE AND AUDIENCE ANALYSIS

Need Assessment of Audiences

Survey and Other Analysis Methods

PART 3 - INTERPRETIVE GOALS & STRATEGIES

WMA Interpretive Goals

Visitor Interpretive Goals

Agency Interpretive Goals

WMA Interpretive Theme Statement

Subthemes

PART 4 - CURRENT INTERPRETIVE EVALUATIONS AND PROPOSED ACTION

PART 5 - PROPOSED INTERPRETATION

Visitor Center Exhibits

Subthemes

Outdoor Interpretive Exhibits and Structures

Subthemes

Personal/Guided Interpretive Services

Subthemes

Interpretive Media/Printed Materials

Subthemes

Support Facilities

PART 6 -INTERPRETIVE GUIDELINES

Site Planning

Entry Sites

Picnic Areas

Non Motorized Camping Areas

Motorized Camping Areas

Research Sites

Restoration Sites

Overlooks

Trailheads

Agricultural Areas

Display Guidelines



Hardware Ranch Wildlife Management Area Management Plan

- Personal/Guided Guidelines
- Use of Logos
- Materials, Textures, and Colors
 - Wood features
 - Stone features
 - Metals
 - Paints Stains and Preservatives
 - Concrete and Asphalt Applications

- Architectural Details
 - Recreation Structures
 - Interpretive structures
 - Administrative, Utility and Storage Structures
 - Residences
 - Visitor Center
- Administrative Signage
 - Identified areas of need
 - Informational/Orientation Structures
 - Site Identification structures
 - Site closures
 - Road closures

PART 7 - EVALUATION AND MONITORING STRATEGIES

APPENDIX

- Planning Process Detail
- Sub theme details
- Survey
- Evaluations
- Accessibility Guidelines
- Strategies interpretive planning and design on a minimal budget

CHAPTER 3- EDUCATION PLAN

PART 1 – PURPOSE AND NEED

- What is Conservation Education ?
- What is the purpose of Conservation Education on the WMA, relationships?
- Conservation Education Theme Statement and connections to interpretation

PART 2 - AUDIENCE ANYLISIS

PART 3 – EDUCATION GOALS & STRATEGIES

- WMA Education Goals
- Visitor Education Goals
- Agency Education Goals
- WMA Education Theme Statement
 - Subthemes
 - Topics

PART 4 - CURRENT EDUCATION EVALUATIONS AND PROPOSED ACTION

PART 5 - PROPOSED EDUCATION

- School Programs
- Community Programs
- Events
- Support Facilities

CHAPTER 4 – VISITOR SERVICES

PART 1 – OVERVIEW

- What are visitor services?
- Purpose of Visitor Services and connections to Interpretation, Education



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PART 2 - VISITOR SERVICES GOALS AND OBJECTIVES

PART 3 - FRONT DESK SERVICES

- Reception
- Sales
- Dissemination of Information
- Guidelines for Cleanliness

PART 4 – MARKETING (non management action related marketing)

- Hours of operation
- Interpretive Opportunities
- Educational Opportunities
- Volunteer Opportunities

PART 5 – EMPLOYEES

- New Hire Guidelines
 - Policies and Procedures
 - Recruitment
 - Interviewing
- Employee Training
 - New Employees
 - Returning Employees
- Employee Handbook
- Uniform Policy and Appearance
- Guidelines for public interaction
- Performance Monitoring and Evaluations

CHAPTER 6 - BUILDING ASTHETICS, SCENERY AND LANDSCAPE MANAGEMENT

PART 1- OVERVIEW

- Existing Conditions
- Desired Future Conditions

PART 2 – MANAGEMENT STRATEGIES

- Vegetation
- Recreation Sites
 - Non-motorized
 - Motorized
 - Picnic Areas
 - Roadside Vistas: Wayside/Pull-offs

PART 3 – BUILDING AESTHETICS

- Building Inventory and Purpose
- Current Conditions
- Desired Future Conditions
- Building guidelines

PART 4 - LANDSCAPES

- Inventory and Purpose
- Current Conditions
- Desired Future Conditions
- Landscape Guidelines

PART 5- SITE AMENITIES

- Trash receptacles
- Picnic tables and benches
- Horse corrals and hitching posts
- Water hydrants
- Outdoor restrooms parking lots



Hardware Ranch

Wildlife Management Area Management Plan

PART 6 – LANDSCAPE TREATMENTS

- Entry portal plantings
- Administrative and storage building plantings
- Residential plantings
- Interpretive plantings: teaching gardens



Appendix G – Sensitive Species & Utah Heritage Data

This appendix lists the sensitive species in Cache County and depicts sensitive species in the vicinity of Hardware Ranch WMA as assembled by the Utah Natural Heritage Program.

Disclaimer: This list was compiled using known species occurrences and species observations from the Utah Natural Heritage Program's Biodiversity Tracking and Conservation System (BIOTICS); other species of special concern likely occur in Utah Counties. This list includes both current and historic records. (Last updated on September 15, 2009).

| Cache County Common Name | Scientific Name | State Status |
|----------------------------|---------------------------|--------------|
| AMERICAN WHITE PELICAN | PELECANUS ERYTHORHYNCHOS | SPC |
| BALD EAGLE | HALIAEETUS LEUCOCEPHALUS | SPC |
| BLACK SWIFT | CYPSELOIDES NIGER | SPC |
| BLUEHEAD SUCKER | CATOSTOMUS DISCOBOLUS | CS |
| BOBOLINK | DOLICHONYX ORYZIVORUS | SPC |
| BONNEVILLE CUTTHROAT TROUT | ONCORHYNCHUS CLARKII UTAH | CS |
| BROWN (GRIZZLY) BEAR | URSUS ARCTOS | S-ESA |
| BURROWING OWL | ATHENE CUNICULARIA | SPC |
| CALIFORNIA FLOATER | ANODONTA CALIFORNIENSIS | SPC |
| CANADA LYNX | LYNX CANADENSIS | S-ESA |
| DESERET MOUNTAINSNAIL | OREOHELIX PERIPHERICA | SPC |
| FERRUGINOUS HAWK | BUTEO REGALIS | SPC |
| FRINGED MYOTIS | MYOTIS THYSANODES | SPC |
| GRASSHOPPER SPARROW | AMMODRAMUS SAVANNARUM | SPC |
| GREAT PLAINS TOAD | BUFO COGNATUS | SPC |
| GREATER SAGE-GROUSE | CENTROCERCUS UROPHASIANUS | SPC |
| LEWIS'S WOODPECKER | MELANERPES LEWIS | SPC |
| LONG-BILLED CURLEW | NUMENIUS AMERICANUS | SPC |
| LYRATE MOUNTAINSNAIL | OREOHELIX HAYDENI | SPC |
| NORTHERN GOSHAWK | ACCIPITER GENTILIS | CS |
| PYGMY RABBIT | BRACHYLAGUS IDAHOENSIS | SPC |
| SHARP-TAILED GROUSE | TYMPANUCHUS PHASIANELLUS | SPC |
| SHORT-EARED OWL | ASIO FLAMMEUS | SPC |
| THREE-TOED WOODPECKER | PICOIDES TRIDACTYLUS | SPC |
| TOWNSEND'S BIG-EARED BAT | CORYNORHINUS TOWNSENDII | SPC |
| WESTERN RED BAT | LASIURUS BLOSSEVILLII | SPC |
| GRAY WOLF | CANNIS LUPUS | |
| WESTERN TOAD | BUFO BOREAS | SPC |
| YELLOW-BILLED CUCKOO | COCCYZUS AMERICANUS | S-ESA |



Appendix H – Sport Fishery Stream Classifications

Class 1

Class 1 streams are the top quality fishing waters of the state. They should be preserved and improved for fishery and similar recreational uses. These streams are generally outstanding in natural beauty and of a unique type. They are accessible by modern car at suitable points, and larger waters are floatable with suitable launching facilities. Productivity is such that it supports high fish populations in good condition of one or more species of the more desirable game fish. Natural reproduction or the stocking of small fish maintains an excellent sport fishery.

Class 2

Class 2 waters are of great importance to the state fishery. These are productive streams with high aesthetic value and should be preserved. Fishing and other recreational uses should be the primary consideration. They are moderate to large in size and may have some human development, such as farms or commercial establishments along them. Many Class 2 streams are comparable to Class 1 except for size.

Class 3

Class 3 streams comprise approximately half of the total stream fishery habitat in Utah. These waters are important because they support the bulk of stream fishing pressure in Utah. Water developments involving Class 3 waters should be planned to include fisheries as a primary use, and fishery losses should be minimized and enhanced when possible.

Class 4

Class 4 streams are typically poor in quality with limited fishery value. Fishing should be considered a secondary use. A few Class 4 waters provide an important catchable fishery in areas where no other fishery exists. Water development plans should include proposals to enhance fisheries values where feasible.

Class 5

Class 5 streams are now practically valueless to the fishery resource. Other water uses should take preference over fisheries in planning water developments; however, many water in this class could provide valuable fisheries if additional water could be provided.

Class 6

Class 6 streams are those stream channels which are dewatered for significant time periods during the year. Many of the stream sections now in the class could support good to excellent fish populations if appropriate minimum flows could be provided. Planning of water developments should include consideration for restoration of these dewatered sections of stream.



Appendix I – Outreach Programs

I EDUCATION PROGRAMS

A. Community Programs/Events

1.) *Free Fishing Day/Bear River Celebration –annual*

- » Audience: Cache Valley Youth
- » Partners: UDWR, Cache Anglers, USU Water Quality Extension, USFS Logan Ranger District and Logan Environmental Department.
- » Funding: partners, with 0-\$200 WMA budget depending on year.
- » Description: Includes passports to fun, free gift bags and free t-shirts. Families learn fishing skills and impacts of recreation of the Bear River Watershed.
- » Participation: 250-600
- » Awareness/Exploration/Stewardship:
- » Coordinated/Implemented: Assistant Manager

2.) *Elk Festival – annual*

- » Audience: general public
- » Partners: UDWR Hunters Education, USFS Logan Ranger District, Utah State Parks, Stokes Nature Center, USU Water Quality Extension, Hyrum City Youth Council, Cache Archers
- » Funding: \$600-\$1000 Ranch Budget
- » Description: free wagon rides to view the elk and youth activity stations.
- » Participation: 400-1,300
- » Awareness/Exploration/Stewardship:
- » Coordinated/Implemented: Assistant Manager

3.) *Hyrum City Christmas Party –Annual*

- » Audience: Hyrum City Residents
- » Partners: Hyrum City,
- » Funding: Equivalent of driver hours paid for by Hyrum City (ASK DAN), gifts, photos and snacks provided by Hyrum City
- » Description: local community event offering free rides, photos with Santa in the visitor center and visitor center exploration. Kicks off the winter season and used as a training day.
- » Participation: 500-1,200
- » Awareness/Exploration/Stewardship:
- » Coordinated/Implemented: Assistant Manager and Manager

4.) *National Trails Day -intermittent*

- » Partners: sponsored by USFS and hosted at HRWMA
- » Participation: reaches 100-300 visitors
- » Coordinated and Implemented: Assistant Manager

5.) *4H Nature Camp – intermittent*

- » partnership with 4H and UDWR
- » sponsored by 4H and hosted by UDWR
- » reaches up to 100 youth
- » Coordinated and Implemented: Assistant Manager

B. School Programs (Fall and Spring)

1.) *Mountain Wilds to Wetland Wonders*

- » Education partnership, created in July 2006 between Bear River Migratory Bird Refuge and HRWMA.
- » Field trip and teacher training experience offered to Box Elder School District fourth grade. Acts as the fall and spring school program for HRWMA
- » Funded by grant dollars
- » 2010 pilot year for Cache County School District, expansion will depend on funding.
- » Coordinated and Implemented: Assistant Manager



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2.) *Natural Resources Field Days (Fall)*

- » Partnership between Cache County 4-H, USFS Logan Ranger District, Soil Conservation Districts, USU Water Quality Extension and UDWR.
- » Funded completely through partners, little to no out of budget expense.
- » UDWR hosts, provides lesson plans and volunteer teachers for the wildlife station.
- » Reaches about 1,200-1,700 Cache County fourth graders per year.
- » Coordinated and Implemented: Assistant Manager

3.) *All About Elk (Winter)*

- » Traditional winter school program, includes sleigh ride and three half hour activity/learning stations.
- » Stations focus on wildlife adaptations and habitat.
- » Coordinated and Implemented: Assistant Manager

C. Teacher/Volunteer Workshops and Trainings

1.) *Leave No Trace Train the Trainer*

- » funding and logistics provide by Back Country Horsemen of Utah
- » HWR provides supplemental info, training and site development
- » Coordinated and Implemented: Assistant Manager

2.) *Combined Workshop*

- » Project Wet Wild and Learning Tree workshop, “combined projects”
- » Three day event
- » Ranch hosts the event and provides administrative and planning support.
- » Coordinated and Implemented: Assistant Manager

3.) *MWWW Teacher Trainings*

- » Training sponsored and funded by HWR, BRMBR through grants, in conjunction with the MWWW curriculum project.
- » Required for teachers wishing to participate in program.

4.) *4. NR Field Days Volunteer Training*

- » Train 60 + pre service elementary teachers at USU to assist with the teaching during NR Field Days.
- » partners combine to train students on individual stations

II. GENERAL OUTREACH CALENDAR

| | |
|------------|--|
| July: | Combined Workshop |
| August: | Leave No Trace Training |
| September: | Volunteer Training for NR Field Days, NR Field Days |
| October: | MWWW, Elk Festival |
| November: | MWWW, Recruit outreach seasonal (drivers and VC Staff) |
| December: | Hire /train seasonals, All About Elk, sleigh rides, staff Visitor Center |
| January: | All About Elk, Staff Visitor Center |
| February: | All About Elk, Staff Visitor Center, MWWW Teacher Training |
| March: | Prep and Development |
| April: | MWWW |
| May: | MWWW |
| June: | Free Fishing Day |

III. CURRENT EDUCATION AND OUTREACH FACILITIES

A. Classroom

- » Current classroom has been converted from a short order café and snowmobile rental shed to a classroom for school programs, workshops and meetings.
- » Can handle 20-30 adults for workshop and 75 (sitting down on floor, tight) students for school program introduction or as an indoor rotation option in poor weather.

B. Visitor Center

- » Used for introductions, poor weather and visitor center explore (displays)



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- C. Parking Lots (VC Parking lot and Sleigh Ride Parking Lot)**
 - » Used for “activity stations”
- D. Curtis Creek**
 - » Behind the Curtis Creek gate about 1/8 mile east of visitor center.
 - » This area used for MWWW. All stations take place “up” Curtis Creek
 - » Offers a more remote, natural location for programs
- E. Teaching Garden**
 - » Not currently used for school programs. Area next to visitor center that has been fenced off and planted to native species for interp and education purposes. Not used because no spring, fall, summer programming are not funded.

IV. CURRENT INTERPRETIVE OUTREACH PROGRAMS (Active)

- A. Sleigh Rides/Drivers**
 - » Driver recruited, hired, trained and supervised by Dan (horse and interp training).
 - » Seasonal handbook with background information and sample scripts provided by Marni.
 - » Drivers provide information to the public over the course of a 20 minute sleigh ride.
- B. Visitor Center Desk/Staff Public Interaction**
 - » Seasonal staff hired, trained and supervised by Assistant Manager.
 - » Typical front end desk duties

V. EXISTING INTERPRETIVE OUTREACH FACILITIES/AREAS (passive)

- A. Welcome Kiosk**
 - » Funded and constructed by USFS Logan Ranger District during the Olympics.
 - » Scheduled for new interpretive panels that focus on welcoming and orientating the visitor to Hardware Ranch.
 - » Utilized most in the summer.
- B. Sleigh Line/Sleigh Ride**
 - » Under construction funding provided by RMEF and plan in place.
 - » Sleigh line area will include new rails and benches and interpretive displays to enhance the waiting and ride experience.
- C. Visitor Center and Dining Room**
 - » As money and time allows display frames will be replaced. Currently all old and outdated displays have been removed from the VC.
 - » Visitor Center will focus on wildlife, habitat and management. The foyer will be a welcoming area and identify the Ranch as UDWR and the dinning room will be a historical display area.
- D. Habitat Teaching Garden**
 - » Development and construction partnership between UDWR, Backcountry Horsemen and Willow Valley Free Trappers.
 - » Design was created by a dedicated hunter, trail breaking and maintenance will be by dedicated hunters.
 - » Currently no interpretive labels on plants due to lack of funding and staffing available to make labels.
- E. Campgrounds**
 - » Ranch does not have official campgrounds. We have many areas that have been abused and are currently used for trailer camping and dispersed.
 - » No signs, rule postings. Location information etc. at any sites
- F. Site Signage**
 - » Current signage is completely inadequate. What we do have is not useful and poorly done.

VI. CURRENT VOLUNTEER OUTREACH PROGRAM

- A. Dedicated Hunters**
 - » Provide a variety of projects for individual volunteers and group projects. Much of the facilities upgrades have been done by dedicated hunters.



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- » Most summer weekends are consumed with dedicated hunter project management.

B. Resident Volunteer Program

- » Program developed in 2004 and ran successfully for one year. Program canceled and grazing contractor moved into volunteer house. Contractor no longer on site, volunteer house used as a grant match.
- » Volunteers are required to provide 12-16 hours of service and we provide them with housing to facilitate this service.
- » Program provides us with consistent volunteers to help with programs and upkeep/maintenance of houses.
- » Could easily be reinstated if Bunkhouse become available.

C. USU Volunteers

- » Over 60 students from USU Elementary Education Department are involved in volunteering to teach the wildlife and other stations at NR Field Days.

D. Interns

- » Efforts to recruit USU students for non paid internships have been unsuccessful.
- » Presently, there is no funding available for paid internships.



Appendix J – Camping/Access Management

Wildlife-oriented recreation is within the mission of HRWMA and it has been the tradition of Division management to accommodate hunting, fishing, wildlife viewing and camping as long as these activities are done with wise stewardship in mind. However, examples of wise stewardship and abuse are both found at HRWMA.

The first step for the Division to help balance wildlife, fish, and habitat needs and public recreation desires is to inventory and describe current camping activities at HRWMA, to identify habitat and wildlife management problems related access and camping, and to determine the Division's management stewardship policies and actions with regard to camping and access at all camping and other access points on HRWMA.

Current Camping Activities

Although there are no designated camping areas at HRWMA, and dispersed camping occurs throughout the area, Vehicle-based camping at HRWMA is concentrated into four main areas, shown on the following maps:

- » Blacksmith Fork
- » Curtis Creek
- » Rock Creek
- » Peavine

Camping needs and opportunities at all of the identified camping areas on HRWMA were assessed using the Camping Assessment form on the following page. All five of the identified camping zones and associated sites for each zone have been cataloged in this manner. Based on the Division stewardship team review of camping needs and impacts at HRWMA, a number of protocols and recommended rules to manage camping have been identified.

The most important step is to identify specified access points for both vehicle-based and tent camping, and for other recreational uses. Camping rules may be posted at identified areas to require:

- » Limiting camping stays at HRWMA to 14 days - Some areas have chronic and unfair use by some people parking and leaving their RV for long periods.
- » Requiring the use of portable toilets - Public toilets are not currently available at most areas on HRWMA. Human waste is unsightly, unhealthy and contributes to diminished water quality.
- » Disallowing motorized vehicle and OHV use in some areas
- » Limiting camping to tent camping only in some areas.

Additional posted rules include:

- » Requiring Leave No Trace camping techniques in some areas.
- » Limited to day use only in some areas. - In most cases, day use will mean from 5:00 a.m. to 10:00 p.m. to accommodate hunters, anglers and wildlife watchers.
- » Direction to stay on existing roads

In order to direct recreational users and campers to appropriate areas, signing will be posted to identify:

- » Angler and sportsman access points;
- » Areas for OHV trailer parking
- » Areas where OHVs may be used at campsites



Hardware Ranch Wildlife Management Area Management Plan

HRWMA Camping/Access Management Inventory (Sample)

Zone: Upper Blacksmith Fork Canyon

Campsite: Camp Wapiti

| Task | Comments |
|---|---|
| 1. Identify impacts to resources caused by recreational use | Toilet paper is often left hanging in the vegetation. Erosion from improper vehicle use. Campfire rings that do not meet fire prevention standards OHV use that stirs up dust and extends on to hay production areas |
| 2. Vehicle access policy change recommendation | No OHVs in Campgrounds. |
| 3. Signing, fences & barriers required. | <div> <u>Signs:</u> Please Pack Out All Garbage Camping Limit 14 Days No OHVs Fishing Access Point Kiosk and WMA Map </div> <div> <u>Barriers:</u> Boulders along SR101 to prevent erosion Log rail fence to direct access at stream Define vehicle path with boulders of logs </div> |
| 4. Camping or no camping justification | This area is a traditional camping area and should remain open to camping if use is done responsibly. |
| 5. Camping Rules Publishing Recommendations (list publications) | All hunting and fishing guide books HRWMA website State Parks Publications |
| 6. Interagency Review | State Parks and Forestry, Fire and State Lands Divisions have recommended the use of fire rings to identify camping areas and to reduce wildfire potential |
| 7. Campfire Recommendations | Install ten state approved campfire pits. These pits will help define camping areas in camping season and provide fire pits for winter visitors to enjoy the tubing area. |
| 8. Wise Stewardship and Enhancement Opportunities | This area is lacking shade. Plantings of cottonwood trees along the river would greatly enhance this area for campers. It would also provide additional habitat for song birds and neotropical migrants. Gravel roads to allow access in winter months to access the traditional tubing hill on the south side of the river. Install a small bridge to access the tubing hill. |

The results of the camping assessments for each of the four camping zones at HRWMA are summarized here:

Blacksmith Fork Campsites

There are 13 individual access sites in this camping zone of HRWMA. Of the 13 sites, four will accommodate camping. The rest are recommended to be designated as “Day Use Only” because they are in the open and not well suited for camping and are mostly used for angler access anyway. Five areas have buck and rail fences to protect vegetation near the stream. Most of the areas have fire rings that do not meet state standards for wildfire prevention.

Since there are no toilet facilities and dispersal away from these sites is not practical to practice Leave No Trace methods, self-contained trailers and portable toilets are recommended for these camping areas.

Curtis Creek Campsites

There are just two areas that are designated as tent camping areas in this zone. Both receive light use. Both areas have buck and rail fences to protect vegetation near the stream. Both of the areas have fire rings that do not meet state standards for wildfire prevention. A vault toilet is accessible for the west camping area in the OHV Parking Area. Leave No Trace practices are recommended for the east area.

Rock Creek Camping Zone

There are six access sites in this camping zone of HRWMA that will accommodate camping. One is for tent use and five are trailer or RV use. The areas have buck and rail fences to protect vegetation near the stream. Most of the areas have fire rings that do not meet state standards for wildfire prevention. Since there are no toilet facilities and dispersal away from these sites is not practical to practice Leave No Trace methods, self-contained trailers and portable toilets are recommended. Because of proximity to OHV roads, OHV use is allowed at all RV campsites



Hardware Ranch

Wildlife Management Area Management Plan

Peavine Camping Zone

There are two access site in this camping zone of HRWMA. One will be designated as day use only and one will allow camping. There are scattered fire rings that do not meet state standards for wildfire prevention. Since there are no toilet facilities and dispersal away from these sites is not practical to practice Leave No Trace methods, self-contained trailers and portable toilets are recommended. Because of proximity to OHV roads, OHV use is allowed

Based on the camping assessment, the Division proposes to allocate camping uses at HRWMA as shown on the Camping/Access Management map next page.



Goal 2 – Protect and improve riparian habitat

Goal 3 – Accommodate responsible recreational uses and realign recreational policies to reduce negative effects on the wildlife management area



Camping/Access Management

Access Points To Be Signed As Follows:

Tent and RV camping are permitted. ■

Tent Camping Only. ■

Day Use Only. ■

In most cases, day use will mean from 5:00 a.m. to 10:00 p.m. to accommodate hunters, anglers and wildlife watchers.



Additional rules may be posted at specific areas to include:

Stays fewer than 14 days (some areas have chronic and unfair use by some people parking and leaving their RV for too many days).

Portable Toilets Required. Public toilets are not currently available at most areas on HRWMA. Human waste is unsightly, unhealthy and contributes to diminished water quality.



Campfire rings that do not meet State of Utah standards for wildfire prevention will be replaced.

Camping at Hardware Ranch Wildlife Management Area is concentrated into five main areas:

Peavine
Rock Creek
Curtis Creek
Lower Blacksmith Fork
Upper Blacksmith Fork

No Untrailered OHVs In Blacksmith Fork Access Areas

Untrailered OHVs Allowed In North Areas

Blacksmith Fork River



Wildlife oriented recreation is within the mission of HRWMA and it has been the tradition of DWR to accommodate hunting, fishing, wildlife viewing and camping as long as these activities are done with wise stewardship in mind.

Examples of wise stewardship and abuse are both found at HRWMA. In coming months, the DWR institute policies that promote wise stewardship by recreationists.

While camping is allowed, it is not the primary function of wildlife management areas

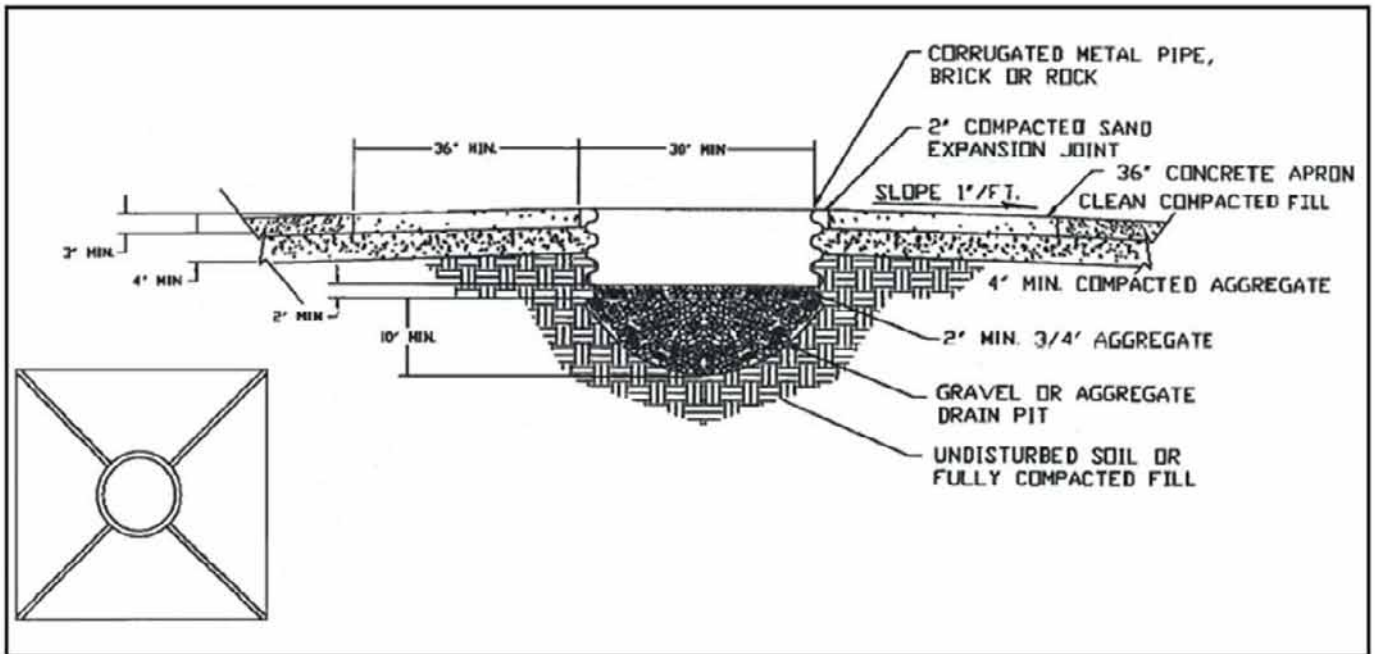




Hardware Ranch Wildlife Management Area Management Plan

Wildfire Prevention at Campsites

The DWR will work with Dedicated Hunters, conservation groups and other volunteers to install fire rings that meet State standards for wildfire protection. The approved fire ring design is shown below:



1. Area must be cleared of all combustible material and debris for a minimum of 5' from center of fire pit.
2. Apron should be constructed of concrete, rock, or brick.
3. Corrugated metal pipe can replace rock or brick.
4. Fire pit area must be free of any overhead branches for a distance of 25' or more.